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CAOUTCHOUC GUTTA-PERCHA

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1913 IN THE RUBBER TRADE—AND 1914.

POSSIBLY some humorist may say that the only trouble with 1913 was the 13, but the trouble with 1913 as far as concerns the rubber trade—and as far as there was any trouble—cannot be diagnosed quite so simply. Taken as a whole, the rubber trade has no just ground for any specially vociferous complaint against the year just closed, but on the other hand it must be admitted that it was not a twelvemonth that called for any particular jubilation. All in all, it was rather disappointing—and from a complication of causes.

First, there was the periodical ebb that always follows the business flood. Sometimes this commercial recession is assignable to definite causes and again it seems simply to come because it is due. 1913 was a recessional year everywhere. All the commercial centers of Europe have complained of a perceptible slowing down of the machinery of trade. In this country, in addition to world conditions we had the political upheaval that generally attends the entrance of a new administration with a variety of new policies to be tried out. This is upsetting always. So every American industry, from steel down, has been disposed to take in sail while it charted the course ahead. And when this particular new administration rushed through a radical tariff and promised sundry innovations in the banking and currency systems, enterprise was still further convinced that it was a good time to sit tight and await events.

In addition to troubles at large the rubber trade has enjoyed a few of its own. The tire department has suffered from too much prosperity. Two years ago, when prices were at their highest, the talk, in the trade and out, was all on the prodigious profits of the tire makers. The natural result—a great rush to make tires; until the production, or at least the capacity of production, outran the capacity of consumption. Then came the inevitable scaling of prices, amounting to nearly 25 per cent.—averaging tubes and cases of all sizes—during the year; and this on top of an earlier reduction in 1912. And there were the flood in Ohio and the strike in Akron, both unforeseeable and thus impossible to guard against, and both destructive of rubber property.

As to the makers of footwear, they have not suffered so much from over-production as from under-consumption. The manufacturer of rubber boots and shoes is in one respect an unhappy mortal—he is always throwing dice with fate, and can't help himself. Given normal conditions, it can be forecast to a nicety how many pairs of leather shoes, how many pairs of stockings and how many hats any given twelvemonth will consume, but with rubbers it is purely a guess. Will it be an old-fashioned winter with snow to the window sills, or one of those new-fashioned open winters when everybody goes about dry shod? Last winter was decidedly an open one, and the retailers' stocks of goloshes did not move as they should; so all the maker of rubber footwear can do now is to use much discretion as to the size of the stock he will manufacture ahead and pray vigorously for snow.

In the mechanical line things have pursued more nearly a normal course, but with the slacking up of general industry fewer belts have been called for, less hose has been wanted and not so much packing been ordered from the factory. In druggists' sundries there would seem to be less ground for a falling off in business, but still there has not been that rhythmic pulse beat indicative of robust health. People have needed hot water bottles just as much as at any former time, but with eggs selling at 60 cents a dozen there are economic souls who forego the hot water bottle and use a heated brick.

But—

There is another side to the picture. There is the

forward look as well as the backward look. If the year 1913 as viewed by the rubber manufacturer seemed to be marked by a few clouds, the year 1914 appears altogether bright.

There have been times when crude rubber sold as low as at present, and even lower, but there has been no time in many years when there was at once low-priced rubber and every promise of the continuance of this condition. The rubber manufacturer can look forward into the coming year confident that he will secure his rubber supplies at a moderate price. This means not only that he can lay his plans along the regular lines of his operations with assurance that these plans can be carried out, but it means that he can give his attention to a great extension of his business into lines that have hitherto been impracticable for him to follow; for obviously with Pará rubber in the 70's and plantation rubber in the 50's the rubber industry is susceptible of an enormous expansion that would be impossible at the materially higher prices that have prevailed most of the time during the last ten years.

There is another most favorable feature for the manufacturer—and that is in the great progress made in the standardizing of plantation rubbers—progress already carried to such a degree that very soon it will be possible for the manufacturer to buy his rubber with the same assurance of quality as he now feels in the purchase of many of his other supplies. He will soon be free from the tedious and expensive necessity of testing every new purchase of rubber that comes to his mill.

Taking it all in all, therefore, the rubber manufacturer can look forward to the coming year not only with courage and hope but with good cheer and optimism.

Real distress, however—or at least a very real apprehension of distress—has been felt in the world of crude rubber. In Brazil the distress has been genuine and unfeigned. An American just returned from that country states—as will be noticed in his letter appearing elsewhere in this issue—that the *seringueiros* are starving. Possibly they haven't quite reached that unhappy stage, but certainly none of them are likely to be overfed. In Manáos and Pará many shippers have put up their shutters. A loud complaint, too, has come from Africa, for who wants cheap Africans with plantation first latex selling close to 50 cents? And as to the East, our Singapore correspondent writes that if there is not a mend in rubber prices very soon some 400,000 acres of the 1,400,000 now planted to rubber will cease to be cultivated and lapse back into jungle. The probability is that this unfortunate condition will not come about but obviously the outlook from the planter's standpoint is quite different with rubber at 50 cents from the cheerful aspect when it sold at $2 a pound.

However, the planters have no occasion for any undue worriment, for there seems nothing surer in the future of human events than the fact that the rubber manufacturing world will have to look to the plantations for its supplies. So that, while the planter's percentage of profit may be much lower than in the past, his volume of profit should increase with each succeeding year. It is certainly a safe prediction that all those planting enterprises which rest on the sound foundation of carefully selected location, honest capitalization and efficient management will prosper, while those that have been promoted simply to sell stock will go their logical way into unsung oblivion.

"THE INDIA RUBBER WORLD" FOLLOWS THE UPTOWN MARCH.

NEW YORK has enjoyed for the past ten years the distinction of being the most torn-up city in the world. What with new subways, tubes under the East River, tunnels under the North River and sundry bridges, its condition has been one of perpetual upheaval. But in all this change there has been one abiding principle—the city's center moves steadily north.

When, ninety years ago, old John Jacob Astor, the original, built the Astor House—just torn down—his contemporaries told him pleasantly that he was stark crazy to put his hotel so far uptown; but the city's center soon reached the Astor House, and left it behind fifty years ago. Everything is moving north, and THE INDIA RUBBER WORLD moves with the rest.

Three years ago it joined the northward trend and left its quarters at Broadway below Canal street, for a new home on Thirty-eighth street; but during the last three years many large rubber interests have left their former downtown locations and taken up their business abodes in the 50's, while the shopping center and hotel district have moved up to Forty-second street, if not already across it; so THE INDIA RUBBER WORLD again takes up its northward march and with this issue is established in its new quarters at 25 West Forty-fifth street.

This is in the very heart of metropolitan activities. It is close to the Grand Central Station, the subways and "L's"; within a few minutes' walk of all the leading hotels; a near neighbor to many famous clubs, and only three blocks from the stately marble pile that houses the great Public Library. It is a location for high thinking and

plain living—if one insists on it. THE INDIA RUBBER WORLD fattened perceptibly on Thirty-eighth street, taking on an additional 200 pages a year. It hopes to round out still further in its new home. Incidentally, it might be mentioned that it had greatly outgrown its old quarters and desperately needed the generous increase of floor space—which it is now so much enjoying.

THE LAST OF THE BOSTON PIONEERS.

TWENTY years ago there were in Boston eight men whose names were known from the Atlantic to the Pacific. Their activities centered chiefly about the manufacture of mechanical rubber goods and footwear. They were friends, lunching together almost daily, calling each other James and George and Henry. Of widely different temperaments, they often disagreed and threshed out their differences like the good fighters they were, but with no diminution of their basic respect and final friendliness. They were sound business men, and successful. The death of George H. Hood marks the passing of the last of them. Those of us who remain and who knew them recall their strong individuality, their many virtues, their interesting personalities. Their faults forgotten, their achievements acknowledged, they pass into history as pioneers and founders of the rubber industry.

IS RUBBER HEADED TOWARD HIGHER LEVELS?

OUR Singapore correspondent, whose letter published in November on the subject of direct shipments of rubber from Singapore to New York created not a little comment in the trade, has sent us another communication—appearing elsewhere in this issue—in which, under the title "Will 1914 See a Shortage in Rubber?" he discusses the possibility (which appears to him to be a probability) that the present low level of prices, if maintained, will cause such a contraction of rubber shipments as to produce a decided shortage. He contends that at 2s. a pound—the present price of first latex being but a few cents above that figure—comparatively few plantations are able to do more than pay expenses, and that unless an increase of price occurs in the very near future there must be a marked shrinkage in plantation operations, while the cheaper African rubbers will be driven from the market and the shipments from the Amazon be reduced to one-third of their present volume. Even allowing for an output of 55,000 tons from the Eastern plantations for 1914, he predicts, unless prices mend, that instead of 140,000 tons, to meet the needs of manufacturers for the year, there will be only 100,000 or possibly 110,000 tons—or a shortage of from 30,000 to 40,000 tons.

Predictions as to future rubber supplies are always of interest when coming from those who have reliable information on which to base their forecasts, but it is quite possible that our correspondent takes too dark a view of the situation. It is a case where supply will doubtless adjust itself to demand automatically, and as soon as the output begins to drop by reason of low prices the necessities of the manufacturers will assuredly send prices up again and thus call forth an increased supply.

MEXICO FROM THE INSIDE.

DURING the past decade a great many letters have appeared in this publication from an American correspondent in Mexico who went to that country twenty years ago and engaged in the planting of agricultural products suited to that climate—rubber trees among the rest. His descriptions sent us from time to time of the development of the *Hevea* and *Castilloa* trees on his plantation have been exceedingly interesting and full of information as to the rubber possibilities of that Republic. But the latest letter from his pen—which appears in this issue—does not refer at any length to rubber developments, but rather is a very candid exposition of the Mexican situation as seen by a foreigner so long resident in Mexico as to be capable of forming sound and just opinions. His references to Washington are not altogether in a complimentary vein, but they appear well worth reproducing, as they are the opinions of an intelligent and truthful observer. And he is undoubtedly right when he states that these opinions are shared by a very large part of all the Americans and foreigners resident in Mexico.

Practically the only definite utterance regarding the Mexican situation that has come from Washington was given out some weeks ago when the administration called upon all Americans in that country to leave and come home. In reply to this our correspondent asks, "What are they going to do for a living when they get to the States? It is not easy to throw up a $300 job or carry off in your pocket a railway, a mine, a plantation or any other possession worth holding on to—not to mention a paying commercial business."

The Mexican property held by Americans runs into the hundreds of millions. American money invested in rubber plantations and the guayule industry would

alone amount to $50,000,000. No one doubts for a moment the lofty motives that actuate the President, or the conservative statesmanship of his methods in his treatment of the Mexican situation, but it is quite natural that the American residents in that country—harassed by the Federals and harried by the rebels—should look upon their lot as a most unhappy one.

THE CLERK CAN UNDO IT ALL

A PERSPICACIOUS reporter on the "New York Times," having investigated the retail shoe trade of the metropolis, recently discoursed on the great burden the retailer bears in the multiplicity of shoe styles which he is compelled to carry, particularly as this vast variety of leather shoes makes it compulsory for him to carry an equal variety of rubber shoes. The reporter then continues: "Returns of rubbers to retail stores on the ground of unsatisfactory wear have been almost as numerous of late as the shoe styles. In a large majority of cases they are said to be due to misfitting, which in itself is due to the discrepancy in the number of rubber styles carried when compared to the number of models the shoe stock contains."

This touches what might be called one of the strong weaknesses of the rubber shoe situation. The manufacturer may do his work most devotedly, putting into his shoes the finest Up-river Pará, the best compound discovered since rubber footwear was first made seventy years ago; he may get the most skilful workmen obtainable and pay them extravagant wages, and every department of his plant may be conducted without a flaw; but if the retailer's clerk, either from languor or indifference or because he doesn't have the right shoe in stock, tries to fit a Cuban-heel rubber over a broad, low-heeled shoe and permits the customer to go forth thus misfitted, he is not only laying up trouble for his own store, but is inviting popular objurgation upon the innocent manufacturer and upon the trade generally. If he has a rubber in his store which will fit the customer's shoe he should get it, tho he have to unearth the bottom-most carton of the uttermost case; and if he has not a shoe that will fit he should say so, thereby losing the sale but retaining his self-respect and the customer's good will.

WHAT THE AUTO SHOWS HAVE COST THE TIRE MAKERS.

THE large tire companies whose displays have been a conspicuous and interesting feature of the automobile shows for the past few years will be noticeable in the exhibitions to be held in New York and Chicago and other cities during the next few weeks by their absence. To be sure there will be some exhibits of tires, but the large companies that have made the chief displays—like the United States Tire Co., the Goodrich, the Goodyear, the Firestone—have decided not to take part in this year's shows.

The reasons for this withdrawal are not stated, but there are certain reasons that are quite obvious. In the first place, these episodes are undoubtedly very disturbing to the regular and orderly routine of the companies' work; but a more substantial reason for discontinuing participation in these events lies in the very great expense that they entail. The mere cost of space is but a trifle, probably not exceeding for any one company $300 or $400, nor does the display itself—the preparation, arrangement and removal of exhibits—involve any considerable outlay; but when one surveys the usual concomitants it becomes evident that the expenditure must reach a very formidable figure. For instance, there is the handsome printed matter which has always been handed out with lavish generosity, a large part of it going to youngsters and other catalog collectors who by no possibility could ever be classed among purchasers of automobiles or users of tires. In addition there is the large volume of advertising usually placed in the local city press calling attention to the display at the show. And even exceeding these items is the expense of the entertainment which is an inevitable part of an occasion where good fellows get together and everyone wants to show his friendliness to everybody else—and especially to a potential buyer.

It is safe to say that a number of companies have expended over $30,000 each on a single exhibition. It is stated on good authority that the last New York show involved an outlay among all the exhibitors of $1,000,000. It would be a conservative estimate to place one-fifth of this, or $200,000, among the tire men. To be sure, this is not a very large figure, compared with the volume of business transacted by the big tire companies, but it is a large figure unless it is justified by the returns—and evidently the tire people have decided that it is not.

THE RUBBER TARIFFS OF OTHER COUNTRIES.

ONE of the most legitimate as well as most effective methods by which the American manufacturer can make reprisals on foreign manufacturers who may seek to invade his market is by a counter invasion of their markets. To be sure, the great reduction in rubber duties in the bill passed early in October has not yet resulted in any conspicuous increase in importations, but foreign manufacturers will certainly be disposed, sooner or later, to try their fortune in the American market, and the home manufacturer should be prepared for this event.

In order that he may be well informed as to what barriers he will have to hurdle to get into foreign fields THE INDIA RUBBER WORLD has prepared, and publishes in this issue, a detailed table giving the rubber tariffs of all of the eighteen countries which in the fiscal year of 1912 imported American rubber goods to the value of $100,000 and over. Some of these tariffs are high and some are low; some are general, applying to all countries alike, and some are preferential, giving the United States certain advantages—but the American manufacturer who at any time feels disposed to retaliate for any invasion of his territory will be able to tell by this table just what tariff obstacles lie in his way.

The Rubber Situation in Brazil.

The following account of conditions in the Amazon country was written by an American just returned from a year's stay in the Madeira-Mamore district.

DURING the past year the rubber market of Brazil, Bolivia and Peru has shown a marked decrease in prices, which has caused great consternation among the rubber exporters of these countries.

In December, 1912, Pará rubber sold for $1.12 per pound, while Caucho sold for 82 cents per pound. During 1913 prices have dropped and continued to go down until October of that year, when Fine Pará sold for 73 cents per pound and Caucho for considerably less. This is the lowest rubber market since 1908.

Practically all the business of Northern Brazil is governed

SMOKING LATEX IN THE AMAZON COUNTRY.

by the rubber market, and as there is such a low market at the present time business is more or less at a standstill. Shortly after the final drop in rubber prices, many of the large business houses were closed, but reopened later, altho trading was not very brisk. Many of the business men state that they have no recollection of a time when money was so scarce. This low market has also affected the government in these parts, as the main source of revenue is derived from rubber. It is stated that in some cases government employes have not received their salaries for ten months.

The Madeira-Mamoré Railway Co., which operates through the Madeira rubber district, has, since active operation began in July, 1912, been running three trains per week, but beginning November 1 only one train was to be run. This is due to the fact that little or no rubber is being shipped by exporters throughout this entire belt.

Suarez, Hermanos & Co., the rubber barons of Bolivia, as well as Ahlers & Co., and Asensi & Co., of the Madeira district, are holding back their shipments, as it is stated that they cannot accept such prices as are being offered at this time. It may also be stated that the outlook for the immediate future is not very promising.

The writer talked with several rubber men whose lands lie between Porto Velho and Manaos, and they are all more or less pessimistic. He also talked with Senhor Hoya, a large exporter on the Rio Javary, Peru, and he stated that there is plenty of rubber to be had in his district, but that it will not be put on the market while present conditions exist.

It is true that some rubber is being shipped to New York and Europe, but in small quantities and only on special contract. The expense incurred by these rubber exporters in tapping their trees, collecting and smoking the rubber, as well as the cost of handling and freight charges, which are exorbitant, in getting the rubber to the coast for foreign shipment, to say nothing of the export duties, make it practically an impossibility for them to sell in a low market.

Take the case of Suarez, Hermanos & Co.: As already stated their rubber lands are located in Bolivia. When the rubber is collected and prepared for export same has to be brought down from the interior to Riberalta in *batelãos* or big rubber boats; thence to Guajara Merim, Brazil, by larger boats. From the latter place it is conveyed to Porto Velho by rail, where it is transshipped to Manáos and Pará by small river steamers. Moreover, the company is forced to pay an export duty in Bolivia, as well as an import and export duty in Brazil.

Few rubber manufacturers know or realize to what extent the crude product has to be handled before it is loaded on the ocean-going steamers.

The rubber lands of Asensi & Co. are located at Calama on the Rio Madeira. In order that this company may get its rubber to the coast for shipment, it is necessary for the *seringueiros* to carry it on their heads from the interior to a large warehouse located on the river's bank, where it remains until one of the small freight steamers plying on this river calls for freight. These same methods of transporting the rubber are used by practically all of the exporters in Brazil.

The various rubber exporters have different scales of wages. The *seringueiros* employed by the Guapore and Julio Mueller Rubber Cos. receive from 3$000 (0.97) to 7$000 (2.24) per day, while Suarez, Hermanos & Co., as well as many other rubber companies, pay their rubber collectors on a percentage basis, so much per hundred kilos. The latter can earn on an average of $500 to $750 per season, but in most cases it is less. In any case, the wages are low, when the life these men live and the hardships and dangers endured are taken into consideration. In many cases the *seringueiro* is always indebted to his employer, who provides him with such food and clothing as he may require for himself and family.

The *seringueiro* enters into the wild rubber country when the tapping season begins, about October or November, and here he remains until the season is over, approximately seven months later. During this time he, with a few companions, is isolated from the outside world.

In June, 1913, Mr. Akers, together with a rubber commission, composed mostly of Englishmen with rubber interest

in Ceylon and the East, made a trip to the wild rubber lands of the Madeira with the view of ascertaining whether or not more up-to-date methods could be used for the handling of the crude product. Another series of tests was made in September of this year, but it was stated, after these were completed, that such methods as are used in the East could not be adopted in Brazil.

It is impossible to say just how long the slump in the rubber market will continue, but unless a change in conditions takes place soon many of these rubber gatherers in Northern Brazil, Bolivia and Peru must certainly starve.

BULLETIN OF THE MUSEU GOELDI, PARA.

THE Museu Goeldi of Pará, which, under the administration of Dr. Huber and his assistants, has become famous the world over, has recently issued its report or "Boletim," covering the year 1910. It is a comprehensive volume of 340 pages, divided into two parts, the early part dealing with the administrative features of the institution, while the rest—constituting about 300 pages—give the results of many of the scientific investigations made by the museum.

The administrative officials for the year 1910 included: Honorary director, Professor Dr. Emilio A. Goeldi, Berne, Switzerland; acting director and chief of Botanical Section, Dr. Jacques Huber; chief of Zoological Section, Dr. Emilia Snethlage; assistant for Zoology, in charge of Entomology, Sr. Adolpho

MUSEU GOELDI—ADMINISTRATION BUILDING.

Ducke. This group of scientists is supplemented by five technical assistants and by an administrative staff of fourteen persons in various capacities.

Seven scientific journeys were made by members of the technical staff with important results as to geographical knowledge. During the year under report additional land was acquired for the purposes of the Museum and its annexes, while further recommendations are made in the same directions.

ZOOLOGICAL GARDEN.

Several valuable specimens were added during the year, the total number of animals being increased from 680 in January to 720 in December. This number included 234 different species, 220 of which belonged to Northern Brazil (Pará, Amazonas, Maranham, Ceará).

AQUARIUM.

The aquarium was finished during the year 1910, but owing to the glass sides not proving sufficiently strong to resist the pressure of the water they had to be replaced by others stronger in character.

BOTANIC GARDEN.

The report states that while the aspect of the garden reflects great credit on those engaged in its conservation the want is felt of a scientific assistant. Nevertheless, various notable improvements were made, particularly in connection with the opening of new sections to replace the older portions which had been

WATERFALLS NEAR OBIDOS, STATE OF PARA.

abandoned on account of their sandy and infected nature. The older parts of the garden were devoted to the extension of the rubber plantation. Reference is made to the important collections of orchids and other plants contributed by Commander Simão da Costa and by Sr. Adolpho Ducke.

At the Experimental Station the tapping was continued of the two groups of rubber trees referred to in the previous annual report—with encouraging results. One group of these trees, from 10 to 13 years old, tapped during the months October to May, with a knife invented by the director, gave an average yield in dry rubber of about 13 grams (nearly ½ ounce) per tree per day.

The Amazonian Herbarium was supplemented by 772 varieties, while the General Herbarium received a contribution of 50 plants gathered in the State of Ceará by Dr. Snethlage.

LIBRARY.

Owing to the efforts of Dr. Rodolpho R. Schuller, acting librarian, the elements have been partly collected for an "Amazonian Library," which will be of material assistance to the museum.

METEOROLOGICAL SERVICE.

This service has been conducted at the request of the Federal

WATERFALLS NEAR OBIDOS, STATE OF PARA.

and State governments in connection with the National Observatory of Rio de Janeiro. A series of meteorological tables for the year 1910 and two previous years forms part of the report.

DONATIONS AND VISITORS.

During the year 1910 contributions were received from 61 donors. The number of visitors averaged about 13,000 a month during the first half of the year and about 14,000 during the second half, the total for the year being 164,686 visitors.

SCIENTIFIC PART.

The scientific part of the report includes special contributions from the principal members of the staff and occupies the larger part of the volume. It is to a great extent geographical and thus of permanent interest. "From the Xingú to the Tapajoz" records two journeys of Dr. Emilia Snethlage made between the years 1906 and 1908 by that learned and intrepid woman for the purpose of making her way from the former to the latter river through the affluent rivers Iriri and Jamauchim. The story of her travels

WATERFALLS NEAR OBIDOS, STATE OF PARA.

is graphically told in some forty pages and supplemented by 15 photographic illustrations as well as a map. Next in order is a "Comparative Vocabulary" of the Chipaya and Curuahe languages, showing the equivalents of several hundred Portuguese words; compiled by Dr. Snethlage after her return home.

In a hundred-page treatise on "Scientific Explorations in the State of Pará" Sr. Adolpho Ducke deals with "The Municipality of Faro" and "The Municipality of Obidos." This detailed account of the two districts named embraces their principal topographical and scenic features, illustrated by a dozen local views.

Dr. Huber then follows with eighty pages of "New Contributions to the Knowledge of *Hevea*," under the following heads: I. The Geographical Distribution of *Hevea;* II. Some *Hevea* Varieties of the River Içá, Putumayo; III. Distribution of Varieties of *Hevea* in the State of Pará; IV. Variability in Character of *Hevea* and Possibilities of a Methodical Selection. Dr. Huber's well known mastery of botanical science is shown in every page of this monograph as well as in the final paper in the work, also from his pen "On a Collection of Plants from the Region of Cupaty (River Japurá-Caquetá)."

An appropriate conclusion to the volume is a colored map showing the geographical distribution of the principal rubber trees in the State of Pará. This map is due to the joint labors of Sr. José Piçanço Diniz and Dr. Jacques Huber.

In a comprehensive summary of the works published in 1909-10 within the scope of the museum's action, 35 pages are devoted to a review of current literature under the heads of: Traveling, Geography and Meteorology, Anthropology, Zoology and Botany.

Nearly 30 views of high artistic character serve to illustrate the stories of their travels contributed by two of the principal officials. The whole volume is highly creditable to the official staff of the museum, as showing what it has done to carry out its objects under the leadership of its talented director, Dr. Jacques Huber, whose name is so widely known in connection with rubber.

The publication of the report for 1910 has been delayed through the absence of Dr. Huber, and that for 1911 and 1912 is now on the press.

COMPARISON OF BRAZILIAN, PARA AND PLANTATION RUBBER.

At the annual meeting held recently at Edinburgh of the Tebrau Rubber Estates, the chairman, Mr. P. M. Matthew, remarked that Plantation Pará stood in a class by itself and required different treatment in manufacturing from any sort of wild rubber. This difference was a substantial one, which up to the present time the ablest rubber chemists had been unable to satisfactorily explain. While it was not merely a question of curing, the superiority of fine Pará was probably due to the particular curing process to which it had been subjected. Unless this result could be obtained by means adapted to Eastern conditions, manufacturers would be unable to dispense with fine Pará.

Smoking or treatment with antiseptic vapor during the process of drying was not curing in the proper sense of the word, nor did it impart to rubber the characteristics of fine Pará. Such rubber did not give better results in manufacture than properly prepared crêpe.

THE RUBBER GROWERS' ASSOCIATION'S COMMITTEES.

The general situation of rubber has been under investigation by three sub-committees of the Rubber Growers' Association, London. While the first of these took up the question of the advisability of combination or restriction, and the second dealt with the cause of the present fall, the third considered the questions of standardization and the publication of working results. As a result of the deliberation it was decided that combination in regard to selling might be considered, if 50 per cent. of the producing companies would come into line.

As to forward contracts, they were not condemned when their time of delivery is not too protracted; the sub-committee not considering such transactions as likely to play into the hands of the "bears."

With regard to the recent slump in plantation rubber, the sub-committee expressed the opinion that it was due to the planting interest and not to Mincing Lane. Manufacturers would not object to rubber being permanently quoted at about 3s. per pound.

The sub-committee on standardization leaves that question to the special standardization committee. While the publication of outputs and other statistics was in itself undesirable, the practice has now become so general that a change might be difficult to introduce.

RUBBER SKATES SIX FEET LONG.

German army authorities have been experimenting with a device by which to walk on water, or rather to skate on water, because the motion resembles that of skating rather than walking. The device, in fact, is called a water skate. It is about 6 feet long, made of rubber, and when inflated looks not unlike a mammoth cigar. It is fastened on the foot like a snow shoe. It has been sufficiently perfected so that the walker has no difficulty in preserving his equilibrium. In fact soldiers while using these water skates have carried heavy loads on their backs and found no difficulty in firing with almost as much accuracy as when standing on land. They are useful, too, in leading horses across streams. A few of them can be fastened together and converted into a raft, and a number of them put side by side across a stream serve as a foundation for a pontoon bridge. These German water skates promise to be very useful.

A GERMAN SOLDIER EQUIPPED WITH RUBBER WATER SKATES.

A GLANCE AT EXPORT STATISTICS OF RUBBER GOODS.

ALL statistical returns derive their value from two sources: completeness of detail and the facility of general survey. Year by year, the annual records show progress under detailed heads, but a glance at the figures of a series of years may prove instructive as to export trade in rubber goods.

From about 3 million dollars in the fiscal year ending June 30, 1901, the figure rose to about 11 million for 1911-12 (the latest year for which details are available), while the estimate for the fiscal year 1912-13 shows about 14 million dollars.

TABLE A—SHOWING AMERICAN EXPORTS OF RUBBER MANUFACTURES FOR 1900-1913.

Fiscal year.	Value of rubber goods exported.
1900-01	$3,017,268
1901-02	3,462,402
1902-03	4,176,351
1903-04	6,214,910
1904-05	4,789,817
1905-06	5,692,385
1906-07	6,214,910
1907-08	6,705,105
1908-09	6,615,074
1909-10	9,060,895
1910-11	10,947,248
1911-12	11,167,289
1912-13	14,324,894

By table A it will be seen that the twelve fiscal years 1901 to 1912 are divisible into three periods:—1901 to 1903, averaging 3½ million; 1904 to 1909, averaging 6 million; and 1910 to 1912, averaging 10½ million. Thus the last three years showed on an average 3 times the yearly amount of the first three.

While these total figures are instructive, a dissection into the principal articles illustrates detailed progress. In applying this test to the period since 1909, table B shows progress all along the line.

TABLE B—SHOWING EXPORTS OF AMERICAN RUBBER MANUFACTURES, CLASSIFIED, FOR 1908-1912.

	Belting and packing.	Boots and shoes.	Tires.	Other goods.	Total.
1908-09...	$1,498,445	$1,292,673	.....	$3,823,956	$6,615,074
1909-10...	1,960,825	1,984,739	.....	5,115,331	9,060,895
1910-11...	2,163,416	2,219,430	2,677,577	3,886,825	10,947,248
1911-12...	2,315,484	1,502,890	3,204,642	4,144,273	11,167,289

Owing to the statistics of tire exports having been published for the first time in 1911, no comparative figures are available for the earlier years as to tires, which are included for those periods with "Other goods." The separate returns for the fiscal years 1911 and 1912 are shown for tires.

Comparing the percentages of increase shown for the fiscal year 1911-12 as against 1908-09, the gain was:—belting and packing about 60 per cent.; boots and shoes about 16 per cent.; all other goods about 90 per cent.; while the total average was about 70 per cent. These figures illustrate a satisfactory expansion of American rubber goods export trade in its principal items. It is to be regretted that the Washington reports do not furnish a closer analysis of the articles comprised under "all other goods," but this category includes a large number of items.

DISTRIBUTION OF ARTICLES AMONG COUNTRIES.

As will be seen on reference to the detailed statistics of the fiscal year 1912 published in THE INDIA RUBBER WORLD March, 1913, page 317, the total of $11,167,289 was distributed among 82 different countries, situated in the six grand divisions. This table is there shown in full detail for the respective countries and principal articles, but a summary will be found in annexed table C.

TABLE C—SHOWING GENERAL DISTRIBUTION OF EXPORTS OF AMERICAN RUBBER MANUFACTURES IN 1911-12.

	Belting and packing.	Boots and shoes.	Tires.	Other goods.	Total.
Europe	325,073	955,636	1,744,056	2,131,370	5,156,135
North Amer..	1,145,482	93,602	1,081,843	1,348,442	3,669,369
South Amer..	187,643	81,540	96,438	235,013	600,634
Asia	106,966	77,717	40,837	100,087	325,607
Oceania.....	253,936	273,452	226,881	296,993	1,051,262
Africa	296,384	20,943	14,587	32,368	364,282
	2,315,484	1,502,890	3,204,642	4,144,273	11,167,289

Thus the preponderance of Europe and North America in furnishing a market for about 80 per cent. of the United States export trade is demonstrated. In fact out of the total of 11 million, no less than 10 million belong to the above-named divisions and Oceania, including 46 countries.

But these 10 million dollars' worth of exports practically went to 18 countries, each taking more than $100,000 worth.

Thus for the 64 other countries there only remained a total of a million dollars.

FOREIGN TRADE OPPORTUNITIES.

A report from an American consul states that a merchant located in Europe desires to establish a connection with an American firm manufacturing rubber thread used for weaving into elastic tape, bands, etc. If the right connections can be formed, f. o. b. New York payments will be made. Negotiations are desired with a view to permanent business. Correspondence may be in English. Report No. 12,120.

An American consular office in the Levant reports that a local business firm desires information and catalogs, with price lists, of all kinds of stump pullers used in uprooting small and large trees, for the purpose of turning forests into land for cultivation. Report No. 12,147.

The Rubber Tariffs of Foreign Countries.

AS shown by the article immediately preceding, entitled "A Glance at Export Statistics of Rubber Goods," the total United States exports of rubber goods in 1909 amounted in value to about 6½ million dollars. This amount had risen by 1912 to about 11 million dollars.

It is a remarkable fact that while this volume of trade was distributed among 82 nations, nine-tenths of the amount was concentrated among the 18 nations shown in table A, which between them took more than 10 million dollars' worth of goods. Great Britain leads in the value of purchases, taking about one-third of the total, or, in conjunction with Canada, more than half of the entire sum. Mexico follows with about 7 per cent. of the whole, while the 550,000 dollar mark is keenly contested by France and Germany. The other items in the table show the amounts taken by other countries exceeding $100,000 for the fiscal year 1912.

TABLE A—SHOWING PRINCIPAL AMERICAN EXPORTS OF MANUFACTURED RUBBER GOODS, CLASSIFIED, FOR THE FISCAL YEAR 1911-12, AND THE COUNTRIES TO WHICH THEY WERE E XPORTED.

	Analysis of Articles—Fiscal Year 1912.					
Exported to	Belting, Packing and Hose. Value.	Boots and Shoes. Value.	Auto Tires. Value.	Other Tires. Value.	Other Goods. Value.	Total. Value.
United Kingdom	$210,547	$348,863	$1,177,746	$134,153	$1,340,853	$3,212,162
Canada	441,222	30,752	696,433	21,371	981,250	2,171,028
Mexico	378,391	4,939	148,480	37,367	133,513	702,690
France	27,448	38,779	316,629	13,947	159,408	556,211
Germany	40,233	102,220	1,160	800	397,256	541,669
Australia and Tasmania	127,706	223,394	24,081	2,574	124,945	502,700
Philippines	93,545	6,734	73,763	103,488	125,782	403,312
Cuba	156,819	7,322	21,714	80,586	129,762	396,203
British South Africa	201,229	19,905	7,049	5,773	29,163	263,119
Japan	74,721	31,350	13,531	9,703	80,426	209,731
Belgium	7,733	57,016	51,620	5,468	78,576	200,413
Brazil	40,777	41,036	24,952	11,273	81,201	199,239
Panama	103,209	11,227	4,073	7,137	28,104	153,750
Turkey in Europe	.....	146,602	....	....	18	146,620
Argentina	38,751	16,346	10,196	5,935	73,586	144,814
New Zealand	31,464	39,143	11,847	9,921	45,355	137,730
Chile	57,315	7,056	354	23,682	25,833	114,240
Italy	2,237	50,325	2,387	13,425	43,917	112,291
	$2,033,347	$1,183,009	$2,586,015	$486,603	$3,878,948	$10,167,922

Table B shows another dissection of the list, but by goods instead of countries. In making this division, the five principal classes of manufactures have been taken into account: belting, hose and packing; boots and shoes; tires for automobiles; all other tires; and other goods. In the subsequent discussion of the principal tariffs of the world, a like plan has been observed.

A dissection of the total purchases by the 18 countries shows the following result:

TABLE B.—Classification of Principal Exports Into Groups of Articles.

Belting, hose and packing	$2,033,347
Boots and shoes	1,183,009
Tires for automobiles	2,586,015
All other tires	486,603
Other goods	3,878,948
Total	$10,167,922

Tires represent a total of 30 per cent., and mechanical rubber goods 20 per cent.; these two staples forming together one-half of the total.

In any consideration of the rubber tariffs of the world, the rates imposed by the above-named 18 countries merit primary consideration. These countries are of a fairly representative character, inasmuch as they form part of each of the grand divisions of the world. Thus European conditions are represented by France, Germany, Belgium and Italy; South American by Argentina, Brazil and Chile, and so on for the other grand divisions. This uniformity is, however, only of a general character, for the operation of each nation's fiscal regulations is of a special nature. It is not merely the application of certain duties at certain rates. Commercial agreements have in various cases essentially modified the tariff provisions. Many paragraphs have been practically modified by various decisions and the doctrine of precedent is becoming more and more the unwritten law of the foreign custom houses. In this connection, the rules for the deduction of tare and for the levying of duty on gross weight require careful study. The introduction of the dual system of tariffs calls for close investigation of its effects. Any American manufacturer who contemplates operating extensively in foreign markets should be in a position to verify the calculation of the landed and delivered cost of his goods at any given point. This does not imply that he will have to sell at a foreign price, but he should know what he has to compete with in order to meet the situation with success.

The succeeding extracts from the tariffs of most of the 18 largest customers of the United States are intended to show the nature of the competition to which American makers are subjected under existing tariff conditions. The equivalents of the foreign denominations are shown in American currency and measurements. In transacting any initial business at foreign prices it is, however, advisable to make a small trial shipment, in order to give the matter a test and to make sure the anticipated duties will be applied to the bulk of the merchandise.

The tariffs of the various countries on rubber goods are as a rule scattered through the various sections, but have been as far as possible grouped into the broad divisions of goods as shown in the tables.

THE UNITED KINGDOM AND CANADA.

Articles manufactured of rubber, together with nearly all other manufactured articles, are admitted into the United Kingdom free of duty. The Canadian duties levied on manufactured rubber goods are given below:

CANADA.

(The rates under the third column marked "General" are those applicable to imports from the United States.)

CRUDE RUBBER, ETC.

Tariff No.		British Preference.	Intermediate.	General.
616	Crude rubber and gutta percha, unmanufactured, powdered rubber and rubber waste; recovered rubber and rubber substitute	Free	Free	Free
616	Hard rubber in sheets, but not otherwise manufactured	Free	Free	Free
684	Rubber thread, not covered	Free	Free	Free

BELTING, HOSE AND PACKING.

610	Belting, not of leather	20%	25%	27½%
683	Fillets of cotton and rubber, not exceeding 7 inches wide, when imported by manufacturers for their exclusive use	Free	Free	Free
619	Rubber or gutta percha hose and cotton or linen hose lined with rubber	22½%	30%	35%
619	Rubber packing	22½%	30%	35%

BOOTS AND SHOES.

617	India rubber boots and shoes	15%	22½%	25%
569	Stockinette for manufacture of boots and shoes, when imported by manufacturers	10%	12½%	15%

TIRES FOR VEHICLES.

592	Tires of rubber for vehicles of all kinds, fitted or not	22½%	30%	35%

OTHER GOODS.

742	Hard rubber, unfinished, in tubes, imported for use by manufacturers of fountain pens	5%	7½%	10%
619	India rubber clothing and clothing made waterproof with india rubber	22½%	30%	35%
562	Oiled silk and oiled cloth and tape or other textile, india rubbered, flocked or coated, not otherwise provided for	20%	27½%	30%
628	Braces or suspenders or finished parts thereof	22½%	30%	35%
528	Webbing, non-elastic, imported for use by manufacturers of suspenders	12½%	17½%	20%
620	Webbing, elastic, over one inch wide	12½%	17½%	20%
646	Belts of all kinds (except silk)	22½%	30%	35%
575	Elastic—round, flat and garter	25%	32½%	35%
619	Rubber mats or matting	22½%	30%	35%
407	Wire, single or several, covered with cotton, linen, silk, rubber or other material, including cable so covered	20%	27½%	30%
660	Clothes wringers for domestic uses, and parts	22½%	30%	35%
652	Combs for dress or toilet (including mane combs)	22½%	32½%	35%
653	Brushes of all kinds	17½%	25%	27½%
688	Artificial limbs and parts, artificial teeth not mounted	Free	Free	Free
618	Rubber cement and all manufactures of india rubber and gutta percha not otherwise provided for	15%	25%	27½%

In the fiscal year 1912 United States exports of rubber goods to Canada included: Belting, hose and packing, $441,222; boots and shoes, $30,752; tires for automobiles, $696,433; all other tires, $21,371; other goods, $981,250; total, $2,171,028.

MEXICO.

Equivalents in American denominations.

Peso, 49.8 cents; Kilo, 2.2 lbs.; "Kilo legal," 2.2 lbs., including interior packing; Centimeter, 0.39 inch.

BELTING, HOSE AND PACKING.

Tariff No.			Pesos.
654	Rubber belts for machinery, whether imported with corresponding machinery or not	Kilo gross	0.11
661	Rubber hose, even tho combined with cloth	Kilo legal	0.12
677	Packing of all kinds and materials for machinery	Kilo legal	0.04

BOOTS AND SHOES.

687	Rubber footwear, even containing cloth	Kilo legal	1.00

TIRES FOR VEHICLES.

634b	India rubber tires for vehicles, even with parts of leather	Kilo net	0.66

OTHER GOODS.

207	Cable, without armor, of common metals covered with any material, and cable uncovered, cylindrical or flat	Kilo gross	0.06
208	Cables provided with cores and covered with any insulating substance	.....	Free
366	Elastics of cotton and rubber exceeding 4 centimeters in width	Kilo legal	0.66
367	Elastics of cotton and rubber, not exceeding 4 centimeters in width	Kilo legal	1.00
510	Elastics of rubber and pure silk mixed with cotton linen or wool, exceeding 4 centimeters in width	Kilo legal	1.50
511	Same, not exceeding 4 centimeters in width	Kilo legal	3.50
409	Garters and suspenders of linen or hemp of all kinds, with or without fittings	Kilo legal	1.50
453	Garters and braces of wool of all kinds, with or without fittings	Kilo legal	2.00
684	Rubber erasers	Kilo legal	0.50
688	Rubber in sheets, combined with cloth	Kilo legal	0.10
689	Caoutchouc prepared for dentists	Kilo legal	3.00
675	Artificial teeth of all substances	Kilo legal	4.00
652	Articles, not specially mentioned, of gutta percha, india rubber, india rubber cloth, waxed or varnished with siccative oil	Kilo legal	0.45

In the fiscal year 1912 United States exports of rubber goods to Mexico included: Belting hose and packing, $378,391; boots and shoes, $4,939; tires for automobiles, $148,480; all other tires, $37,367; other goods, $133,513; total, $702,690.

FRANCE.

Equivalents in American denominations.

Franc (fr.), 19.3 cents; Gram, 15.43 grains; Kilo (k.) (1,000 grams), 2.2 lbs.; 100 Kilos, 220 lbs.; N., net; G., gross; Millimeter, 0.039 inch; Centimeter, 0.39 inch; Square meter, 1.196 square yard.

The "General" tariff is applicable to imports from the United States except three items in No. 620 marked *.)

Tariff No.			General Tariff. Francs.	Minimum Tariff. Francs.
	CRUDE RUBBER, ETC.			
119	India rubber, balata and gutta percha, raw or melted in lumps		**Free**	Free
620	Sheets of india rubber, pure, not vulcanized	100 K. n.	30.00	**20.00***
620	Threads of vulcanized india rubber, 3 millimeters or less in thickness	100 K. n.	9.00	**Free***
	Other	100 K. n.	30.00	**20.00***
	BELTING, HOSE AND PACKING.			
620	Belting, piping, valves and other articles of crude rubber or gutta percha, pure or mixed, soft or hard, combined or not with tissues or other material	100 K. n.	**105.00**	70.00
529	Sheets and fillets for cards, with and without gutta percha	100 K. n.	**260.00**	165.00
	BOOTS AND SHOES.			
620	Boots and shoes of rubbered tissues lined with felt, wool or any cloth combined with wool	100 K. n.	**150.00**	100.00
	Of rubbered tissues lined with cloth of cotton, hemp or flax	100 K. n.	**120.00**	80.00
	With soles wholly of india rubber	per pair	**0.75**	0.50
	TIRES FOR VEHICLES.			
620	Treads, air tubes or pneumatic tires	100 K. n.	**150.00**	100.00
620	Blocks, solid tires for carriage wheels in the rough state, worked or finished	100 K n.	**100.00**	80.00
620	Treads, air tubes or pneumatic tires, covers, etc., for cycle wheels, in the rough state, worked or finished	Dutiable as parts of cycles		
	OTHER GOODS.			
620	Elastic tissues with threads of imitation gold or silver or of any textile other than silk or artificial silk	100 K. n.	**300.00**	200.00
	With threads of silk or artificial silk, combined or not with other material. Less than 20 m. m. and more than 45 m. m. in width	100 K. n.	**300.00**	200.00
	Other widths	100 K. n.	**600.00**	400.00
620	Rubbered tissues in the piece, weighing per square meter 800 grams or more	100 K. n.	**105.00**	70.00
	More than 400 and less than 800 grams	100 K. n.	**200.00**	135.00
	400 grams or less, containing in warp and woof in a square of 5 m. m. side—less than 44 threads	100 K. n.	**300.00**	200.00
	44 threads or more	100 K. n.	**600.00**	400.00
620	Articles made of rubbered tissues weighing 400 grams or less per square meter and containing in the woof and warp in a square of 5 m. m. side 44 threads or more	100 K. n.	**675.00**	450.00
620	Dress shields of rubber sheet without cloth	100 K. n.	**150.00**	100.00
	Of rubbered tissue or of rubber sheet combined with any tissue other than silk and artificial silk	100 K. n.	**380.00**	250.00
	Of rubber sheet combined with tissue of silk, natural, artificial, pure or mixed	100 K. n.	**510.00**	340.00
620	Braces, garters, belts, etc., of textile threads other than natural and artificial silk	100 K. n.	**375.00**	250.00
	Natural or artificial silk combined or not with any other material	100 K. n.	**450.00**	300.00
	Others	100 K. n.	**375.00**	250.00
620	Special rubbered tissues for cards without teeth, without felt	100 K. n.	**105.00**	70.00
	Felt lined	100 K. n.	**120.00**	78.00
535	Wires and cables insulated for electricity, covered with silk in combination with rubber or gutta percha, without a protecting covering of metal	100 K. n.	**150.00**	100.00
	Rubber or gutta percha alone or in combination with materials other than silk, without a protecting covering of metal	100 K. n.	**100.00**	70.00
	Other cable with a metallic core of 5/10 m. m. in diameter or more	100 K. n.	**60.00**	40.00
	Less than 5/10 m. m. in diameter	100 K. n.	**90.00**	60.00
566d	Mechanical stoppers with or without rubber ring	100 K. n.	**40.00**	25.00
636	Fountain or stylographic pens	each	**0.75**	0.50
477b	Imitation leather with balata, caoutchouc or similar base	100 K. n.	**105.00**	70.00

In the fiscal year 1912 United States exports of rubber goods to France included: Belting, hose and packing, $27,448; boots and shoes, $38,779; tires for automobiles, $316,629; all other tires, $13,947; other goods, $159,408; total, $556,211.

GERMANY.

Equivalents in American denominations.

Mark (m.), 23.8 cents; Pfennig (pf.), .24 cent; Kilo, 2.2 lbs.; 100 kilos, 220 lbs.; N., net; G., gross.

The General Tariff Rates apply to imports from the United States except in a few instances where a lower rate is given under the "Conventional" Tariff, as will be noticed in the second column given below:

Tariff No.			General Tariff. m. pf.	Conventional Tariff. m. pf.
	CRUDE RUBBER, CEMENTS, ETC.			
98	India rubber, gutta percha and balata gum, raw or refined, artificial caoutchouc made with oil, and all substitutes for caoutchouc		Free	
345	Caoutchouc and gutta percha cement	100 K.	3.00	....
352	Rubber oil		Free	
570	India rubber, dissolved, with or without admixture of resin	100 K.	3.00	....
571	Soft rubber paste	100 K.	5.00	....
582	Hardened india rubber paste, not vulcanized	100 K.	5.00	....
	BELTING, HOSE AND PACKING.			
575	Driving belts of textile materials impregnated or coated with india rubber, or with external or internal layers of india rubber, or of india rubber with external or internal layers of textile material	100 K.	50.00	40.00
467	Fire and other coarse kinds of hose, combined or not with common metal, rough girths, and driving belts woven or knitted	100 K.	50.00	....
579	Piston packing of coarse textile material in combination with india rubber	100 K.	40.00	....
	BOOTS AND SHOES.			
577	Boots and shoes of india rubber with or without soles of other material—unvarnished	100 K.	70.00	....
	Varnished	100 K.	100.00	80.00
	TIRES FOR VEHICLES.			
574	India rubber tubing for tires of wheels	100 K.	60.00	....
	Other kinds with an underlayer of vegetable textile material; tubing of vegetable textile material impregnated or coated with india rubber; all these whether combined or not with common metals or their alloys.	100 K.	40.00	....
578	India rubber tires for wheels of vehicles and covers for the same of textile materials impregnated or coated with india rubber or with an internal layer of india rubber	100 K.	60.00	....
	OTHER GOODS.			
571	Rolled sheets of soft india rubber, cuttings and strips of unmanufactured india rubber, not vulcanized; also gutta percha paper	100 K.	5.00	....
572	Cut sheets, patent sheets of crude, refined or dyed india rubber, mixed or not with sulphur or other material not vulcanized, also cuttings and strips of the same unmanufactured	100 K.	8.00	....
579	Soft rubber goods when not chargeable at higher duty	100 K.	40.00	....
576	Wagon covers, manufactured of coarse textile material impregnated or coated with india rubber, or with internal layer of india rubber	100 K.	30.00	....
579	Floor cloths of soft india rubber with or without an underlayer of textile material or felt	100 K.	40.00	....
	Varnished, dyed, printed or furnished with impressed patterns, with or without an underlayer of textile material or felt	100 K.	60.00	....
581	India rubber print cloths and card cloths for carding factories, by special permission and under contract	100 K.	30.00	....
583	Hardened india rubber for dental purposes	100 K.	100.00	....
584	Hardened india rubber, vulcanite in plates, bars, cut up or not, but not further worked. Rough pressed goods of india rubber, shaped, but requiring further working. Unworked plates or sheets of hardened india rubber with an underlayer of textile material or paper	100 K.	10.00	....
585	Tubes of hardened india rubber not further worked	100 K.	40.00	25.00
586	Other wares of hardened india rubber combined or not with other materials, so far as not falling under other classes subject to a higher duty by reason of such combination	100 K.	45.00	40.00
	[General Note to Nos. 570 to 586.—Wares of gutta percha, balata gum, or of india rubber substitutes, or wares entirely or partly coated with these materials, so far as not specially mentioned, will be classed as india rubber ware.]			
909	Electric cables encased in a protective cover of metal, etc., to be laid under water or under the earth	100 K.	8.00	....
573	India rubber threads drawn or cut: not combined with spun threads	100 K.	10.00	....
	Combined with vegetable or animal spun threads loosely wound round or plaited thereon	100 K.	20.00	....
	Wound round with silk or with yarn in which silk is contained.	100 K.	60.00	....

Tariff No.	OTHER GOODS—Continued.		General Tariff. m. pf.	Conventional Tariff. m. pf.
	Wound round with other textile material	100 K.	40.00	....
580	Textile materials or felt impregnated or coated with india rubber, or with internal layers of rubber; india rubber wares coated with textile materials or yarn wound thereon. Entirely or partly of silk	100 K.	180.00	....
	Of other textile material		100.00	

In the fiscal year 1912 United States exports of rubber goods to Germany included: Belting, hose and packing, $40,233; boots and shoes, $102,220; tires for automobiles, $1,160; all other tires, $800; other goods, $397,256; total, $541,669.

AUSTRALIAN FEDERAL TARIFF.

Equivalents (same as in England.)

Pound sterling, $4.866; Shilling, $0.243; Penny, $0.020.

The "General" Tariff applies to imports from the United States.

Tariff No.		General Tariff.	British Preferential Tariff.
	CRUDE RUBBER, ETC.		
351a	India rubber crude, rubber wastes, hard rubber in sheets	Free	Free
351b	India rubber powdered or reclaimed	15%	10%
	PASTES, ETC.		
261b	Rubber cements and prepared adhesives	30%	25%
	MACHINERY.		
165	India rubber working machinery—hose machines	15%	15%
	BELTING, HOSE AND PACKING.		
349	Rubber and other hose	25%	20%
353	Belts of leather, rubber and combined materials	25%	20%
433	Woven canvas hose, 2½ inches in diameter and over	Free	Free
423	Cotton, asbestos and other packings; including asbestos cloth (with or without wire) proofed with rubber	20%	20%
	BOOTS AND SHOES.		
346	Goloshes, rubber sand boots and "Plimsolls"	25%	20%
348	Rubber gum and wading boots	Free	Free
350	Soles, pads and heels	25%	20%
	TIRES FOR VEHICLES.		
350	Pneumatic rubber tires and tubes therefor, valved or unvalved: Covers weighing each 2½ pounds or less. Tubes weighing each 1 pound or less	25%	20%
	Covers weighing each over 2½ pounds; tubes weighing each over 1 pound, or ad valorem	1s. 6d. per pound or 25%	1s. 2d. per pound or 20%

Tariff No.		General Tariff.	British Preferential Tariff.
	RUBBER TIRES OTHER THAN PNEUMATIC.		
350	Rubber tires other than pneumatic	25%	20%
350	Rubbered tire fabric, tire rubber	25%	20%
	OTHER GOODS.		
350	Rubber manufactures not already indicated and articles not elsewhere indicated in which rubber forms a part: Bandages, elastic stockings, leggings, knee caps, thigh pieces and wristlets: hat makers' press bags and rings, gas bags, sponge bags, rubber on textile, bed sheets of rubber, ear douches, all rubber invoiced as ear syringes, cash mats, rubber stoppers or corks	25%	20%
351	Boot and apparel elastics, masticated rubber, india rubber syringes, enemas, injection bottles, urinals, air and water beds, air cushions and pillows, cut sheets, surgical tubing	Free	Free
364	Fountain pens, etc., when in fancy boxes	30%	25%
	When not in fancy boxes	5%	Free
145	Lawn sprinklers	15%	12½%
144	Wringers	20%	12½%
111	Diving dresses	Free	Free
328	Toilet combs and shaving sets	25%	20%

In the fiscal year 1912 United States exports of rubber goods to Australia and Tasmania included: Belting, hose and packing, $127,706; boots and shoes, $223,394; tires for automobiles, $24,081; all other tires, $2,574; other goods, $124,945; total, $502,700.

SOUTH AFRICAN CUSTOMS UNION.

Equivalents (same as in England).

Pound sterling, $4.866; Shilling, $0.243; Penny, $0.020.

The General Duty applies to imports from the United States. Imports from Great Britain receive a rebate.

Tariff No.		General Duty.
	BELTING, HOSE AND PACKING.	
61	Bands and belting for driving machinery	3%
89	Conveying hose	3%
102	Packing and lagging for engines, machinery, piping and buildings	3%
	TIRES FOR VEHICLES.	
91	Rubber tires for perambulators imported in long lengths	3%
	OTHER GOODS.	
119	Telegraph and telephone material	3%
81	Felt, rubberoid, uralite and similar substances for building purposes	3%

All goods not elsewhere chargeable with duty and not in free list will be charged with a general ad valorem duty of 15 per cent.

In the fiscal year 1912 United States exports to British South Africa included: Belting, hose and packing, $201,229; boots and shoes, $19,905; tires for automobiles, $7,049; all other tires, $5,773; other goods, $29,163; total, $263,119.

BELGIUM.

Equivalents.

Franc (fr.), 19.3 cents; Kilo (kil.), 2.2 lbs.; 100 Kilos (100 kil.), 220 lbs.

Tariff No.			Francs.
	CRUDE RUBBER, ETC.		
10	Crude rubber		Free
19	Essence or extract of caoutchouc		Free
	BELTING, HOSE AND PACKING.		
33f	Machine belting of leather, rubber or like material	100 Kil.	30.00
	TIRES FOR VEHICLES.		
70	Rubber tires for wheels of vehicles, including those in which other material enters, but in which rubber predominates, according to weight—solid tires	100 Kil.	65.00
	Pneumatic tires, shoes for automobiles and motorcycles with iron studded protective tread	100 Kil.	130.00
	Other kinds	100 Kil.	116.00
	Outer tires for vehicles of less weight than 9½ Kilos	100 Kil.	90.00
	Same, above 9½ Kilos	100 Kil.	60.00
	Inner tubes for automobiles and motorcycles	100 Kil.	170.00
	For other vehicles (including complete pneumatic known as "Boyaux" or tires for racing wheels, consisting of outer protective shoe and an inner air tube)	100 Kil.	150.00
	OTHER GOODS.		
64	Elastic tissues	100 Kil.	320.00
27	Hosiery containing silk and 50 per cent. or less of india rubber. Gloves and mittens ornamented or not	100 Kil.	450.00
54	Plaited cord and tissues of asbestos, combined or not with caoutchouc		5%
10	Manufactures of rubber, not coming under a more favorable number of the tariff		10%

In the fiscal year 1912 United States exports to Belgium of rubber goods included: Belting, hose and packing, $7,733; boots and shoes, $57,016; tires for automobiles, $51,620; all other tires, $5,468; other goods, $78,576; total, $200,413.

PANAMA.

Equivalents.—Balboa, $1; Kilo, 2.2 lbs.

Wares and articles of commerce imported for sale or consumption in the territory of the Republic of Panama are taxed as follows:

Rice, wheat flour, butter, unprepared maize in the grain and lucern—on net value	10%
All other wares and articles	15%

In the fiscal year 1912 United States exports of rubber goods to the Republic of Panama included: Belting, hose and packing, $103,209; boots and shoes, $11,227; tires for automobiles, $4,073; all other tires, $7,137; other goods, $28,104; total, $153,750.

TURKEY IN EUROPE.

With the exception of certain special duties on gems and precious stones, all imported goods pay a duty of 11 per cent.

In the fiscal year 1912 United States exports of rubber goods to Turkey in Europe included: Boots and shoes, $146,602; other goods, $18; total, $146,620.

ARGENTINA.

Equivalents.—Peso (gold), 96.8 cents; Kilo, 2.2 lbs.

Tariff No.		Duty.
1	All goods not specially enumerated in the present law or which are not exempt from duty	25%
3	Articles of all kinds of tissues, completely or partly made up	40%
9	Caoutchouc in natural state	5%
3	Footwear of all kinds, finished or in pieces	40%
8	Automobiles of all kinds, complete, and spare parts separately	10%

In the fiscal year 1912 United States exports of rubber goods to Argentina included: Belting, packing and hose, $38,751; boots and shoes, $16,346; tires for automobiles, $10,196; all other tires, $5,935; other goods, $73,586; total, $144,814.

NEW ZEALAND.

Equivalents (same as in England.)

Pound sterling, $4.866; Shilling, $0.243; Penny, $0.020.

The General Tariff applies to shipments from United States.

Tariff No.		General Tariff.	British Preference.
	BELTING, HOSE AND PACKING.		
479a	Belting for driving machinery other than leather	10%	Free
486a	Engine packing	10%	Free
481a	Canvas, india rubber or other hose, tubing or piping, armored or otherwise	20%	Free
	BOOTS AND SHOES.		
106	Shoes or goloshes known as "Plimsolls" with molded india rubber soles	33¾%	22½%
107	Champion, gymnasium, yachting and lawn tennis boots and shoes with molded india rubber soles	33¾%	22½%
397	Boot elastic	Free	Free
107a	Goloshes and overshoes of all kinds of rubber	33¾%	22½%
107b	Shoettes and sandals, not otherwise enumerated	33¾%	22½%
308a	Children's goloshes, etc	10%	Free
398b	Molded shoe and slipper soles of rubber	10%	Free
486d	Gum boots, half knee, knee or thigh, with soles of leather or rubber	Free	Free
	TIRES FOR VEHICLES.		
470	Rubber cloth, rubber tires, pneumatic tires, outer covers of rubber, inner tubes (for the manufacture of motor cars)	Free	Free
	OTHER GOODS.		
489	India rubber gloves and india rubber valves for pumps	Free	Free
95	Apparel and ready-made clothing	25%	25%
101	Apparel made to order	40%	40%
147	Hair and toilet combs	30%	20%
485	Diving dresses	10%	Free
370	Brace elastic and brace mountings	Free	Free
309	Tarpaulins, wagon covers, etc	30%	20%
396	Waterproof material in the piece, having within or upon it a coating of india rubber	Free	Free

In the fiscal year 1912 United States exports of rubber goods to New Zealand included: Belting, hose and packing, $31,464; boots and shoes, $39,143; tires for automobiles, $11,847; all other tires, $9,921; other goods, $45,355; total, $137,730.

CHILE.

Equivalents.

Peso (gold), 36.5 cents; Kilo, 2.2 lbs.; 100 Kilos, 220 lbs.; G., gross; N., net; W. I. P., with internal packing.

Tariff No.			Valuation Per Kilo in Pesos.	Per-centage of Duty.
	CRUDE RUBBER, ETC.			
309	Raw	G.	0.40	5%
	PASTES, ETC.			
332	Rubber solution for waterproof coats	W. I. P.	2.00	25%
2,267	Gutta percha or traumatic solution	W. I. P.	4.00	25%
294	India rubber residues	G.	0.40	25%
	BELTING, HOSE AND PACKING.			
145	Machine belting with or without parts of metal	W. I. P.	4.00	5%
375	Machine belting with or without tissue or parts of metal		3.00	5%
1,166	Machine beltings of hemp or other vegetable fiber, combined or not with rubber, waxed or painted, with or without parts of metal	G.	2.50	5%
1,305	Machine beltings of cotton tissue, whether rubbered or not, waxed or painted, with or without parts of metal	G.	2.50	5%
1,450	Same as 1,305, but linen tissue	G.	2.50	5%
1,578	Same as 1,305, but of tissue or camels' hair	G.	2.50	5%
966	Cables, etc., for machine packing		1.25	25%
162	Hose with or without parts of common metal	W. I. P.	2.50	35%
1,340	Hose with or without parts of common metal	G.	2.50	25%
372	Tubes or hose for liquids, etc		1.40	25%
373	Same, for gas lamps		6.00	25%
375	Machine belting with or without tissue or metal parts		3.00	5%
	BOOTS AND SHOES.			
114	Shoes or overshoes ("Zuecos") top boots, boots or tips of rubber, with or without interior lining or exterior part of wool or other material, finished or not, for the rain	N.	4.00	25%
382	Soles and parts for footwear		6.00	25%
	TIRES FOR VEHICLES.			
379	Solid tires for vehicles		4.00	25%
380	Pneumatic tires		8.00	25%
	OTHER GOODS.			
2,087	Bandages, etc., of rubber, with or without parts of any other material except wool or silk		16.00	25%
2,088	Bandages, etc., of cotton or other vegetable fiber, with or without rubber		16.00	25%
2,089	Bandages, etc., of wool, with an admixture of common material		16.00	25%
2,090	Bandages, etc., of silk or with admixture of common material		56.00	35%
2,091	Baths of rubber or of tissue rendered waterproof by rubber		6.00	25%
2,133	Shower baths of rubber or of rubbered tissue		10.00	25%
311	India rubber in plates or cables with cloth or wire gauze		1.20	25%

Tariff No.	OTHER GOODS—Continued.		Valuation Per Kilo in Pesos.	Per-centage of Duty.
966	Cables, ropes or yarn whether or not combined with cotton, hemp, jute, rubber or metal, for machine packing		1.25	25%
1,207	Cables for mines or other purposes	G.	0.75	25%
370	Alphabets or letters glued on wood or metal		5.00	25%
371	Rings for packing tins		2.00	25%
374	Brushes for teeth and nails		6.00	35%
376	Erasers		6.00	25%
377	Rubber prepared for dentists		16.00	25%
378	Pads for animals		4.00	25%
381	Floor mats with figured and open work parts		4.00	25%
383	Life belts, with or without tissue		4.00	25%
384	Snuff boxes		10.00	35%
310	India rubber in plates	G.	2.00	5%
313	Hardened or vulcanized rubber in plates	W. I. P.	4.00	25%
312	Stoppers for bottles or flasks	G.	12.00	Free
386	Hairpins and arrows		10.00	20%
387	Cigar and cigarette holders		15.00	35%
388	Cigar cases		10.00	35%
389	Cylinders and discs with records for phonographs and gramophones		5.00	25%
390	Same, without records		2.50	25%
391	Tickets, stamped, for railways or other purposes		15.00	25%
392	Same, unstamped		8.00	25%
393	Combs, plain or openwork, ornamented, etc.		15.00	25%
394	Same, circular, for children		10.00	25%
2,236	Nipples of rubber		6.00	25%
2,237	Nipples or teats of rubber		10.00	25%
2,190	Syringes of rubber		10.00	25%
2,191	Syringes of hardened rubber, with or without parts of glass		6.00	25%
1,313	Elastics for bandages, bands or belts		6.00	25%
1,314	For footwear		6.00	5%
1,456	Elastics with or without admixture of common material, for bands belts or girdles	N.	6.00	25%
1,457	For footwear	N.	6.00	5%
1,583	Elastics with or without admixture of common material, for bands, belts or girdles	N.	10.00	25%
1,584	For footwear	N.	6.00	5%
1,718	Elastics with or without admixture of common material, for bands, bandages or belts	N.	20.00	35%
1,719	For footwear	N.	10.00	5%
1,338	Garters and hip suspenders, with or without rubber	W. I. P.	10.00	35%
1,339	Same, with slight admixture of silk	W. I. P.	20.00	35%
1,736	Garters and hip suspenders	W. I. P.	40.00	35%
2,271	Suspenders of cotton or linen	W. I. P.	8.00	25%
	Of silk, with or without admixture of common material	W. I. P.	20.00	35%
1,663	Braces, with or without admixture of common material, parts of any other material or of rubber, for trousers	W. I. P.	9.00	35%

Tariff No.	OTHER GOODS—Continued.	Valuation Per Kilo in Pesos.	Per-centage of Duty.
1,664	The same, with a slight admixture of silk ..... W. I. P.	15.00	35%
1,787	Suspenders, with or without admixture of a common material, or india rubber with or without parts of any other material ..... W. I. P.	30.00	35%
1,780	Dress shields of rubbered silk tissue, with or without admixture of a common material ..... W. I. P.	15.00	35%
1,396	Dress shields of rubbered cotton tissue .... W. I. P.	8.00	25%
1,500	Dress shields of rubbered linen tissue .... W. I. P.	8.00	25%
1,651	Dress shields of rubbered woolen tissue .... W. I. P.	8.00	25%
179	Braces or suspenders, with or without parts of rubber or any other material, for trousers ..... W. I. P.	10.00	35%
1,401	Braces or suspenders of cotton tissue, with or without a slight admixture of vegetable material, whether or not containing rubber or parts of any other material	7.50	35%
2,165	Gutta percha refined in sticks.....	16.00	25%
395	Articles not specially mentioned.....	6.00	25%
385	Articles not specially mentioned.....	8.00	25%

In the fiscal year 1912 United States exports to Chile included: Belting, hose and packing, $57,315; boots and shoes, $7,056; tires for automobiles, $354; all other tires, $23,682; other goods, $25,833; total, $114,240.

CUBA.

Equivalents.

Dollar as in United States; Kilo, 2.2 lbs.; 100 Kilos, 220 lbs.

Tariff No.	CRUDE RUBBER.		General Rate.	Rebate for U. S.	Rate for United States.
78c	India rubber and gutta percha, crude or melted in lumps	100 Kilo	$3.90	30%	$2.73
	BELTING, HOSE, ETC.				
309a	Rubber hose and piston packing of rubber alone	Kilo	.065	20%	.052
226	Of rubber and fabrics...		25%	20%	20%
226	India rubber in sheets; pure, for valves, square or round; pure, more than ⅛ inch, reinforced with cloth, wire or lead; diaphragms for air brakes, rings for packing and centrifugals..		25%	20%	20%
229	Rings for car springs...		31¼%	20%	25%
309	Pure rubber in sheets not more than ⅛ inch.	Kilo	.065	20%	.052
	BOOTS AND SHOES.				
314	Waterproof and rubber fabrics, including boots and shoes of rubber...	Kilo	0.325	20%	0.26
	TIRES FOR VEHICLES.				
226	Rubber tires and other accessories or separate parts not specifically provided for		31¼%	20%	25%
314	Waterproof fabrics:				
	(a) Cotton..... Waterproof fabrics in the piece, imported by manufacturers for use in the manufacture of raincoats....	Kilo	0.325	20%	0.26
		Kilo	0.25	20%	0.20
	(b) Wool or silk..... Waterproof fabrics in the piece, imported by manufacturers for use in the manufacture of raincoats....	Kilo	0.65	20%	0.52
		Kilo	0.50	20%	0.40
	(Made up articles and manufactures of the materials dutiable under this number, except boots and shoes of rubber, shall be liable to a surtax of 30 per cent.)				
315	All other articles, wares, merchandise and effects not otherwise provided for, except raw material Per Cent.		32½%	20%	26%

In the fiscal year 1912 United States exports of rubber goods to Cuba included: Belting, hose packing, $156,819; boots and shoes, $7,322; tires for automobiles, $21,714; all other tires, $80,586; other goods, $129,762; total, $396,203.

BRAZIL.

Equivalents.

Milreis (1,000 Reis), (gold), 54.6 cents; Paper, 32.4 cents; Kilo, 2.2 lbs.; (Duties on most articles payable 65 per cent. in paper and 35 per cent. in gold.)

Tariff No.	BELTING, HOSE AND PACKING.	Duty Per Kilo in Reis.	
35	Transmission belts for machines.....	1,000	
	BOOTS AND SHOES.		
35	Boots of all kinds.....	3,000	
	TIRES FOR VEHICLES.		
30	Pneumatic tires for motor car wheels		5%
	OTHER GOODS.		
35	Belts, suspenders, garters, galloons laces, plaits, etc.: Covered with silk or with silk mixed with other materials	*30,000	
	Covered with any other material.....	*7,000	
	Rubber prepared or in lump for dentists, vulcanite, etc.....	*3,200	
	Tubes, thread, leaves or sheets.....	*1,200	
23	Wire cables		20%
18	Garters and suspenders, plain or embroidered of silk not otherwise mentioned: Of pure silk.....	50,000	
	Of silk and cotton.....	25,000	
35	Manufactures of india rubber, combined with tissues of cotton, wool or linen: In the piece or in cuttings	4,000	
	In articles not specially mentioned...	7,000	
	Combined with tissues of pure or mixed silk: In the piece or in cuttings	7,000	

*Subject to rebate under the Preference clause.

Tariff No.		Duty Per Kilo in Reis.	
	OTHER GOODS—Continued.		
	In articles not specially mentioned...	15,000	
28	Erasers for common use in offices with common handles.....	2,400	Per Dozen
	With fine handles.....	20,000	Per Dozen
35	Combs, rulers and penholders.....	4,000	
	Door mats	1,300	

The following articles whether vulcanized or not will continue to receive a preference of 20 per cent., when imported from the United States, according to the latest decision of the Brazilian Government:

	Duty Per Kilo in Reis.
Basins and other articles for domestic use, funnels, capsules and bottles.....	2,600
Walking sticks, canes, whips, etc.....	5,000
Tobacco pouches, mouthpieces and match cases.....	4,000
Dolls, toys, etc.....	3,500
Buttons of all kinds.....	4,000
Footwear	3,000
Packing for machinery.....	1,800
Combs, rulers and penholders.....	4,000
Fans	3,000
Belts, suspenders, garters, braids, etc., covered with pure or mixed silk.....	30,000
Covered with any other material.....	7,000
Dental rubber	3,200
Bracelets, earings, medallions, etc.....	10,000
Tubes for flowers.....	7,000
Rubber—combined with tissues of cotton, wool or linen	4,000
Rubber—combined with tissues of silk.....	15,000
Hose, threads, sheets and plates.....	1,200
Mats	1,300
Articles not specially mentioned.....	50%

In the fiscal year 1912 United States exports of rubber goods to Brazil included: Belting, hose and packing, $40,777; boots and shoes, $41,036; tires for automobiles, $24,952; all other tires, $11,273; other goods, $81,201; total, $199,239.

JAPAN.

Equivalents.

Yen, 49.8 cents; Kin, 1.33 lbs.; 100 Kin, 133 lbs.; Millimeter, .039 inch; Centimeter, .39 inch.

Tariff No.		Specific Duties Per 100 Kin in Yen.	Ad Valorem Duties.
	CRUDE RUBBER, ETC.		
143	Crude india rubber and gutta percha and substitutes	Free	
630	Waste or old india rubber and gutta percha, fit only for remanufacturing....	Free	
	PASTES.		
629	India rubber solution (including receptacle)	18.10	
	India rubber paste, reclaimed india rubber and other unvulcanized india rubber....		20%
	BOOTS AND SHOES.		
355	Boots of india rubber.....	50.00	
	Overshoes of india rubber.....	51.60	
	TIRES FOR VEHICLES.		
564	Parts of automobiles excluding motive machinery; general tariff 30 per cent., but under a special clause.....		25%
566	Cycle parts excluding motive machinery..	114.00	
	BELTING, HOSE AND PACKING.		
337	Woven belting for machinery and woven hose: Of cotton.....		25%
	Other	24.00	
629	Belts and belting for machinery.....	22.20	
	OTHER GOODS.		
629	Manufactures of india rubber and gutta percha (soft): Soft rubber in lumps....		20%
	Rods and cords with metal or fibers.....	8.68	
	Other		20%
	Plates and sheets with metals and yarns..	7.40	
	Not exceeding 1 m. m. in thickness.....	95.60	
	Other	50.30	
	Tubes armored with metal.....	15.30	
	Other, combined with tissues, etc.....	13.80	
	Other	93.20	
629	Threads, strips, bands, rings and washers combined with metal, etc.....	15.30	
	Other	55.60	
	Other rubber: In lumps, bars or rods, plates and sheets.....	35.40	
	Tubes	38.90	
	Rings and washers.....	43.70	
	Combs, including inner packing.....	157.00	
	Other goods		40%
631	Hard fibres (rods, plates, sheets, tubes, etc.)	11.40	
335	Air cushions: Wholly or partly of silk...	315.00	
	Other	124.00	
629	Dental rubber	75.80	
486	Insulated electric wires:		
	(1) Armored with metals: Submarine telegraph or telephone wires.....	Free	
	Other combined with india rubber and gutta percha.....	11.00	
	Other	5.50	
	(2) Other: Flexible cords combined with silk		25%
	Other	18.00	
	Other than flexible cords combined with india rubber or gutta percha...	14.50	
	Other		25%
344	Raincoats: Wholly or partly silk.....		50%
	Other	136.00	
320	Elastic webbing, cords, braids, etc., exceeding 8 centimeters in width:		
	Partly of silk.....	148.00	
	Other	86.00	
	Other: Partly of silk.....	40%	
	Other	30%	
629	Erasers	24.90	
	Water bottles	48.50	
	Teats (including inner packing).....	132.00	
	Mats and Matting.....		30%
	Other rubber goods.....		40%

In the fiscal year 1912 United States exports of rubber goods to Japan included: Belting, hose and packings, $74,721; boots and shoes, $31,350; tires for automobiles, $13,531; all other tires, $9,703; other goods, $80,426; total, $209,731.

ITALY.

Equivalents.
Lira, 19.3 cents; 100 kilos, 220 lbs.

The rates shown in the column below designated as "General Tariff" are applicable to imports from the United States, except in a few instances that come under the "Conventional Tariff" rate, as shown in the second column. The figures appearing in this column apply to imports from the United States instead of the corresponding figures in the general column.

Tariff No.		General Tariff Per 100 Kilos in Lire.	Conventional Tariff Per 100 Kilos in Lire.
	CRUDE RUBBER.		
365a	Raw, solid and liquid.....	Free	
	VARIOUS FORMS OF RUBBER.		
365b	In thread	75.00	
365c	In sheets:		
	(1) Sawn	60.00	
	(2) Combined with tissues....	60.00	
	(3) Containing wire or wire gauze	40.00	
	(4) Other, including plates of hard rubber	50.00	
365d	In tubes or pipes:		
	(1) Of sawn sheet.....	60.00	
	(2) Combined with tissues....	60.00	
	(3) Other		40.00
	BELTING, HOSE AND PACKING.		
366	Transmission belts of india rubber or gutta percha combined with tissues.....	60.00	
268	Belting for machinery finished	100.00	85.00
367	Gummed tissues in the piece, for the manufacture of card clothing		20.00
	BOOTS AND SHOES.		
368	Footwear of india rubber:		
	(a) Lined, covered or trimmed with another material...	200.00	125.00
	(b) Other	50.00	
	OTHER GOODS.		
369	Elastic trimmings, ribbons and tissues	140.00	130.00
370	Articles of clothing and travel of india rubber or gutta percha mixed with tissues..	Duty on tissues plus 50%	
	(1) Mixed with tissues of cotton and silk.....		Duty on tissues plus 40%
	(2) Mixed with tissues of wool		Duty on tissues plus 35%
461a	Electric wires and cables composed of one or more metallic conductors, covered with textile materials and varnish, even with gutta percha or india rubber	60.00	50.00
461b	Electric cables composed of one or more metallic conductors, even covered with insulating material, strengthened and protected with iron or any other metal, including submarine cables	30.00	28.00
371	Articles of india rubber or gutta percha not mentioned:		
	(a) Of sawn sheet.....	60.00	
	(b) Mixed with tissues.....	60.00	
	(c) Other, including articles of hardened rubber not specified	50.00	

In the fiscal year 1912 United States exports of rubber goods to Italy included: Belting, hose and packing, $2,237; boots and shoes, $50,325; tires for automobiles, $2,387; all other tires, $13,425; other goods, $43,917; total, $112,291.

A LOWER PRODUCTION OF ASBESTOS.

The frequency with which asbestos is used in combination with rubber makes the supply and production of the former article a subject of interest to the trade in general. Domestic production of asbestos—confined chiefly to the states of Georgia, Vermont and Wyoming—amounted in 1912 to 4,403 short tons, valued at $87,959; and in addition to this there was imported into the United States from Canada (the greatest asbestos producing country in the world) 71,426 tons, this being 67 per cent. of the Canadian production for the year and more than 80 per cent. of the total Canadian exports of asbestos for that period. A considerable proportion of the asbestos produced in the United States in 1912 was superior in quality to the production of 1911, so that while actual production fell off 42 per cent. for the year 1912, the decrease in value amounted only to 27 per cent. The United States remains supreme in asbestos manufactures, and the productive resources of the country in respect to this mineral would no doubt be developed to a much greater extent were it not for the nearness and reliability as well as the extent of the Canadian deposits. The best quality of asbestos found in the United States is a deposit in Arizona, in the Grand Canyon of the Colorado, a point so inaccessible as to very materially advance the cost of getting it to market.

A NEW RUBBER PLANT AT EAST LIVERPOOL, OHIO.

The factory of the Morgan & Marshall Rubber & Tire Co., which has been mentioned in earlier issues of this publication as in process of construction at East Liverpool, Ohio, has been completed and the work of tire production is now going on. The ultimate capacity of this plant is placed at 1,000 tires a day, but its daily output at present is 265. The plant consists of three buildings—a main building, 60 x 200 feet, a machine shop and tire building shop, 50 x 95 feet in size, and a boiler room, 40 x 60 feet. The company confines its attention to the manufacture of one tire, namely, the "Laplock" tire, in which—as is implied by the name—the two sides of the tire overlap at the rim. The leading spirits in this new company are three doctors—which, however, follows precedent, as the originator of the great Goodrich company was a physician. The three East Liverpool doctors are: R. J. Marshall, the president of the company; W. J. Hobbs, vice-president, and Morgan Howells, general manager of sales. The general sales offices are located in Pittsburgh, Pennsylvania.

The same people are interested in another new plant—almost a duplicate of the East Liverpool plant—which is located just across the Ohio river in the town of Chester, West Virginia. This concern, the Chester Rubber Tire & Tube Co., is a distinct corporation and makes a different style of tire. Its capacity is the same as that of the Morgan & Marshall plant and its tires are distributed through the same selling force.

The Editor's Book Table.

CAOUTCHOUC (INDIA RUBBER), BY DR. A. J. ULTÉE, DIRECTOR of the Bezoekisch Testing Station at Djember. Haarlem, 1913; H. D. Tjeenkt Willink & Zoon. [Paper, 8vo., 93 pages, with 58 illustrations.]

THIS handy volume forms one of the series of twelve popular handbooks dealing with the agricultural products of the Netherland Indies in course of publication under the editorship of Dr. J. Dekker, director of the Dutch Colonial Museum.

After an introduction of historical character Dr. Ultée successively treats: The cultivation of *Hevea Brasiliensis;* insects and pests; tapping; preparation; *Ficus elastica;* applications. Under the section of *Hevea* the first subject treated is climate and soil. The necessary conditions, it is remarked, are realized in various tropical countries, especially in Malacca, Sumatra and

Hevea TREES SEVEN YEARS OLD.

some parts of Java, where the growth of rubber is not less productive than in Brazil. The details of clearing next claim attention, followed by a full discussion of the various questions affecting planting and the care of rubber trees. Catch-crops meet with detailed consideration, with diagrams illustrating the combination of Robusta coffee and *Hevea*. The intermediate system of culture originated at the time when some uncertainty was felt as to the future results of *Hevea*, and when it was desired to secure an alternative crop.

Insects and plagues are next treated, followed by a chapter on tapping in which the details of that process as well as the utensils employed are fully discussed. Preparation of rubber is then taken up, including coagulation, drying and packing.

Following the rubber to its ultimate applications, the subjects of vulcanizing, regeneration, substitutes, synthetic rubber and manufactured rubber articles are successively gone into in detail.

As affording a quantity of valuable information about rubber, Dr. Ultée's work will be appreciated by many people in the Netherlands who are interested in this subject.

Many of the 58 illustrations are highly effective, and three of them are here reproduced. In one of them is shown a plantation of *Hevea* trees which have attained the age of 7 years, while

TAPPING A FIVE-YEAR-OLD *Hevea*.

another represents the tapping of a 5-year-old *Hevea*, with the tapper engaged in the operation. A third illustration shows the

PURIFICATION AND COAGULATION OF LATEX.

further progress of the rubber toward a marketable stage by purification and coagulation.

HOW IT LOOKS TO AN AMERICAN IN MEXICO.

(The letter printed below comes from an American who has been a resident of Mexico for twenty-five years and is familiar with all phases of the Mexican situation.)

I AM not afraid of the future of rubber growing in Mexico. As to prices—at low figures the Amazons cannot compete. Also when the British growers, with their capacity for organization and the capital back of them, get through dumping their present large surplus into the market, prices will take on a different aspect—perhaps not very high prices, but profitable ones. We can afford to wait a while. If there is no market for *Castilloa*—well and good; then it's Pará, and so much the better.

Now about Mexico. If there is any one thing the average decent Anglo-Saxon likes, it is fair play—a good sporting sense of a square deal all around and no grudge if knocked out. Isn't that so? Now, then, what do we see? Those of us foreigners who have lived here in Mexico for anywhere from ten to twenty-five years are keenly alive to what we consider defects of character in the individual, and also in society and in the Mexican Government. There are certain elements pretty general all over Spanish America which we are far from sympathizing with, yet there is so much to be said on the other hand that life has been pleasant in these countries. They are an impulsive, generous, kind hearted people—passionate it is true, but just as passionate in their demonstrations of friendship as of the reverse; not as well balanced as we of colder blood, but who is to judge of these racial differences and be sure that it is a just judgment?

I return to my query—now what do we see? Three years of revolution—cruel internecine troubles because of which foreigners have in many cases suffered much in their possessions. And a few lives have been lost—not many among foreigners—least of all among Americans; nevertheless some. During all this time what did the government of the United States do? Nothing worthy of the name—either in behalf of its own citizens or for those of other nationalities, whom, under the Monroe doctrine—an infamous doctrine in the light of modern conditions—it was morally bound to protect. We did not exactly want intervention, i. e., an armed invasion; but we did look for a far different policy from the United States than that carried out during the three years in question. We at many times during this period—when suffering loss, anxiety, and actual attack or assault by bandits or bands of revolutionists—felt bitter enough against Mexico and things Mexican, bitter enough, I repeat, to suit the ideas of the most ardent Jingo. Yet at this juncture, how do you account for the feeling of 95 per cent. of all the Americans and 100 per cent. of all other foreigners in Mexico at this time—that General Huerta is right and the United States wrong? Answer that if you can. You in the States can't, and I can—that's the difference. We know the facts, and you don't.

It is a very long story, and I can't go into it at this writing. Briefly summarized it is something like this: Madero stood for constitutional government and made a monstrous failure. He surrounded himself with iniquitous persons and millions of money ran out of the national treasury like water, with no account of where it went. He refused to resign, declared if deposed he would retire to the Southern Sierras and stir up a greater revolution than ever. He was assassinated—that's the word. By whom and at whose instance, individually or collectively, has never been disclosed—but it makes no difference in the main as affecting things as they are (not what they ought to be—that's another story). The result was General Huerta's ascent to power, as Provisional President under the law and constitution of Mexico—despite the United States' failure to recognize him. Had the United States recognized him long ago, peace would have been established just that much sooner, and there would have been a chance for a successful fair election. These are the impregnable facts, and every intelligent foreigner realizes them.

We all think Gamboa wrote the only reply he could have written and maintain any shred of national dignity. Now here is another feature that disgusts every foreigner resident in the country, and Americans almost to a man. During the three years nothing has been done in defense of foreigners by the United States. Our complaints were treated, to all appearances at least, so far as any material evidence was concerned, with indifference. Intervention too costly a thing to think of! Neither government nor people of the United States—so much taken up with their own money making—and that's the truth—gave a rap for us.

Well, we were pretty sick of the vaunted power of the United States, which neither protected its citizens nor did its duty by other foreigners under the obligation of that detestable "doctrine" so much discussed of late. Suddenly, when things are enormously improved under Huerta's military management of affairs, a queer "Envoy" idea is incubated and he comes to Mexico to tell Huerta to get out and to arrange an impossible armistice with brigands and rebels (Think of it!); to hold a free election—also to tell Americans to leave the country in a third-class passage, or pay their own way. Doubtless many poor devils have been glad to accept his advice. What they are going to do for a living when they get to the States perhaps President Wilson can tell them—I can't. Outside of Chihuahua, Sonora and thereabouts, practically no Americans are leaving. It is not easy to throw up a $300 job, or carry off in your pocket a railway, a mine, a plantation or any other possession worth holding on to—not to mention a paying commercial business. It's silly—that's all there is to it.

Let us hope it will all come out well in the end. Yet I can tell you, as against the opinions of a Cabinet Officer and a lot of Congressmen and Senators whose opinions about Mexico I have absolutely no respect for, that the overwhelming opinion of Americans in Mexico is all for Huerta and that Gamboa's reply was correct. Simply fair play—a decent sporting sense of give and take, and no rubbing it in with bribes of promises to ask American bankers to supply money for Mexico. Briefly then, during all the past three years we have been neglected by our government. The United States did not give a copper for us or our interests. Now, when the United States national dignity feels hurt at a very clear and correct reply to certain overtures, there is a great uproar. Well, it savors of a certain kind of selfishness and we here in Mexico don't like it. Merely fair play is all we ask.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha from the United States for the month of September, 1913, and for the first nine months of five calendar years:

MONTHS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
September, 1913.....	$211,342	$126,903	$680,400	$1,018,645
January-August	1,680,443	856,050	5,865,815	8,402,308
Total, 1913.....	$1,891,785	$982,953	$6,546,215	$9,420,953
Total, 1912.....	1,888,433	1,014,688	6,016,371	8,919,492
Total, 1911.....	1,701,441	1,349,380	5,402,984	8,453,805
Total, 1910.....	1,592,594	1,664,215	4,258,968	7,515,777
Total, 1909.....	1,301,497	1,127,806	3,059,146	5,488,449

The above heading, "All Other Rubber," for the month of September, 1913, and the first nine months of the three calendar years, includes the following details relating to tires:

MONTHS.	For Automobiles.	All Other.	TOTAL.
September, 1913.....	$321,815	$42,153	$363,968
January-August	2,922,200	387,515	3,309,715
Total, 1913.....	$3,244,015	$429,668	$3,673,683
Total, 1912.....	2,533,635	443,443	2,977,078
Total, 1911.....	1,941,773	437,201	2,378,974

Will 1914 See a Shortage in Rubber?

By Our Correspondent Resident in Singapore.

I WONDER whether the originators of the present bear raid on rubber ever dreamed of the ramifications it would expand into! I am of opinion that it will act as a boomerang —which, if it misses its primary object, returns to, and probably hits the thrower harder than it would have hit the "throwee." One result is the shutting down altogether of operations on new areas now ready for tapping—which I advocated months ago. Also a great restriction in outputs is imminent, as the bulk of the crop now produced will not do more than pay expenses—and barely that—at 2s. per pound.

The net result is that unless there is a very big rise in the selling price in the coming year, the crop may conceivably be very little bigger, if any, than this year's, which will bring about a serious shortage of output. Manufacturers are taking all that is now being produced, including remnants of cheap rubbers, so that a minimum of consumption has already been established of about 120,000 tons per year.

As the present prices have caused the closing down of practically all the cheap wild rubbers, Congo, West Africa, East Africa, etc., and as there is great distress in Brazil *re* the cheaper grades, so that these will no longer be available as part of the world's supply, it is quite conceivable that the 1914 crop will not amount to more than 100,000 tons in all. Manufacturers have been counting on a supply of about 140,000 tons of cheap rubber for next year. If they are caught short 40,000 tons of prospective supply, what then? How about future contracts for the delivery of goods? The collapse of the rubber boom will be child's play compared to the result of manipulators' greed arising out of the present situation.

Rubber cannot be produced in a moment, and wild rubber collecting schemes, once abandoned, take a lot of reorganizing, especially when it is well known that there is no permanent future for it, and that it must cease again in a year at most. On all estates here managers are cutting down expenses in every way, coolies are being dismissed and a general state of arrested development is the universal condition.

The price of rubber having been forced below the average possible price of production for the year, the financing of many estates has become an acute problem, which will be permanently reflected in the possibility of their future existence. It has apparently been forgotten by the manipulators that fully one-half of our planted areas are not yet in bearing, and that a great deal of this has to be maintained and equipped out of revenue, or by raising debentures in place of reserve shares which it is no longer possible to place on the market. All this has had a most unhealthy effect, because it has come a year too soon. It has just happened as it would to a child if it were forced to try to walk alone before it was a year old. Given another year of reasonable price, say 3s. 6d., for rubber, and the great majority of estates would have turned the corner with the bulk of their planted areas opened to tapping, and so would have been self-supporting and able to maintain a steady yield sufficient to guarantee manufacturers against unexpected shortage, as the plantation crops can be estimated almost to a ton.

If the present price continues, which seems inconceivable, then many estates will shut down altogether for a year or so. On the other hand, if the attempts made to form rubber growers' protection associations, in England and here, take full effect, then manufacturers and manipulators will be caught between the upper and the nether millstones and free trading in the crop will be at an end. They will have only themselves to thank for this, too, as they have simply driven plantation investors to drastic measures in self defense. The manipulators who have attacked a British industry with a capital of £60,000,000 sterling, have some nerve and will want more before they are through.

If the manufacturers—and this appeals with great force to those in the United States of America, as they use about one-half of the world's supply—would only get into closer touch with the plantations themselves, they would avoid much of the inconvenience they make for themselves by their conservatism. The present system of buying through brokers in New York and Boston came into being in the old sailing ship days when it took many months to get anything from the tropics and there was no cabled information. Now, a manufacturer in, say, Akron, can know the exact state of the market, the visible supply and the future prospects in, say, Singapore or Colombo, in a few hours, so that he is in a position to make any arrangements he likes with regard to supply, with a certainty of being able to obtain his requirements direct from the producing centers without upsetting the market and the producing end. I take it that a steady supply at an average price would suit the manufacturer better than 100 per cent. fluctuations. He will certainly learn a lesson shortly about the results of playing with an immature supply.

The yield for Mid-East plantations will be about 45,000 tons for 1913 (it would have been 50,000 tons but for the slump), and if the low prices continue no new areas will be brought into tapping at all in 1914, so that only a normal increase on present tapped areas will ensue, yielding, say, 55,000 to at most 60,000 tons—instead of 70,000 tons or more. Brazil will certainly be down 10,000 tons; Guayule is no more, at least for the present; Congo and East and West Africa will only produce a few thousand tons at best in place of 20,000 tons odd. Borneo rubber and jelutong are simply wiped off the slate already, and Central America will not produce anything like anticipated yields—so there you are. The year 1914 is likely to open with a crop prospect of between 100,000 and 110,000 tons, in place of the 140,000 tons manufacturers have been counting on, and as they start making forward contracts for supply for next winter's goods they will find themselves "up against it." This will send up the price tremendously, but no one is likely to reopen up wild rubber to any great extent on the strength of it, as all the world knows now that by 1915 plantations can supply all that the world is likely to want, together with the best Fine Hard Para, which alone of wild rubbers has a possible chance of survival.

Manipulators have, in fact, counted on an overproduction that did not exist, and on the possibility of plantations trying to average profits by increasing outputs, not understanding planting finance. Instead of this, many estates have ceased tapping, partially or altogether, and almost all are restricting their outputs, cutting down expenses drastically to average up profits a bit.

There is, however, a silver lining to every cloud, and the present totally unlooked for artificial crisis has caused all companies to think furiously, with the result that real efforts are now being made to produce better quality of rubber; and standardization will certainly come into being shortly. I know of several ways of vastly improving the quality of rubber and there is some small chance now that companies will take these methods up. Before, they were too "sombong" (a Malay term best translated as haughty and purse proud)

to look at anything but the most conservative rule of thumb methods. Now a little scientific knowledge is admitted to be of some possible use.

If the price rises to 3s. 6d. or more, which I anticipate for April next, then the 1,400,000 existing planted acres will be maintained, as it will become possible to finance even the weakest company; but if the price is manipulated down, then most certainly some 400,000 acres will give up rubber cultivation entirely, and there will be trouble in heaps ahead for the manufacturers in the future, as wild rubber will be ousted and the supply of plantation will be kept fairly short under the drastically economic methods necessary to secure a profit.

If the manufacturers will hold the market steady at the 3s. level for another year, then the future supply is assured practically forever, but if acrobatic feats are played with the financing of it this next year then there will be trouble aplenty.

A little forethought on the consumer's part now will permanently assure a free market with a steady, well-regulated supply, but any attempt to jockey the planting industry will result in the formation of a monopolistic production that will give points to an oyster for closeness.

At 2s. per pound the bulk of our rubber, being yet only in its first and second years of tapping, cannot be produced at a profit. Java and Sumatra companies talk loudly about cheap costs, but a careful examination of statistics doesn't seem to bear this out in most cases, somehow. The best English Sumatra estates, with very large areas, are showing good profits, largely due to good forward contracts, but the bulk of the 300,000 odd acres (220,000 being under other control) doesn't seem to pan out so well, due to administration, I presume, tho the poorer yields and the longer time required to reach maturity, as compared with the Straits, have a lot to do with it.

We in the Straits will soon be bringing our average cost of production, all in, down to 1s. 6d. all around, and by 1917 I expect it will average but little over 1s. for the whole country; as, if the price is raised next year and large areas are not allowed to go out of cultivation, practically the whole of our present planted areas, up to and including much of the 1912 planting—say nearly 700,000 acres—will be in full bearing, the bulk of the trees producing as much as they will ever be allowed to do in the future. Standardization of administration will also go a long way to bring this about.

I may say that before very long our rubber will be turned out just like Fine Hard Pará, only better. I am patenting a machine myself which will do this, and there are several others being worked out, too. The rubber will be smoke-cured direct from the latex in the form of thick sheets, which will not have suffered from any contact with machinery while in an immature form, and will be perfectly pure, containing just the proportion of water—or absence of it—that manufacturers require. They can have their rubber made to order, in fact, to suit their requirements.

By the way, may I be permitted to point out that a small error has crept into your calculations *re* the Japanese-planted areas and future yields here, in your August issue. The total area of land leased is 83,000 acres, but the planted area is only 15,000 acres. They do not seem to be doing any too well, owing to labor difficulties, and they don't seem to "savvy" as well as the Chinese owners. There is practically no Japanese labor on them, as they can't stand the climate. The Japanese coolies who have been taken to Brazil will probably die like flies, being quite unsuited to the climate and the work.

Replete with information for rubber manufacturers—Mr. Pearson's "Crude Rubber and Compounding Ingredients."

INSCRIPTION SALES.

IN his recently published work "Factos Economicos" Dr. Miguel Calmon du Pin e Almeida, professor at the Bahia Polytechnic School, explains the manner of conducting "Incription Sales." This system has been adopted in Antwerp with much advantage to the growers of rubber and to the commerce of the port.

When lots of rubber reach Antwerp a sworn broker, a man of perfect integrity and enjoying the confidence of the trade, examines the product minutely, then describing and valuing it. The valuation is in accordance with the general conditions of the world's production and consumption, the visible or estimated stocks and the demands or assumed requirements of buyers. The results of this estimate are embodied in a notice indicating: (1) Names of vessels. (2) Name of the Antwerp commission house for whose account the merchandize is to be sold. (3) Number of each lot. (4) Weight of the rubber offered for sale. (5) Estimate of price by the broker. (6) Summarized description of the product. (7) Date of sale by inscription.

The above notification, printed at least twenty days before the day of sale, is sent with samples to the large American, Russian, German and French buyers, so that they may have time to send in their buying orders.

On the day appointed all these buying orders are handed to the broker, closed and sealed. The opening of the bids commences at 10:30 a. m., and no bid can be accepted after that hour. As fast as the prices are announced they are written down upon a large printed form with about 15 columns. The first column on the left contains the lot numbers and the second the valuation by the broker, while each of the other columns has at its head the name of one of the houses bidding and in the lines below the prices offered for the respective lots. In this way the bids can be compared. The lots go to the higher bidder, unless the seller uses his right of withdrawal from sale.

At 12:30 p. m. there is a general meeting of the sellers and buyers, when the broker reads off the results of the bids entered upon the tabular sheet. When (as rarely happens) two buyers make identical bids the question is settled by one of them giving way, by dividing the lot, by drawing lots, or by giving the lot to the buyer willing to pay the highest price for it.

Bidders are bound to the prices offered by them even when theirs are the only offers and exceed the broker's estimates. The author adds:

"This system would be of advantage to our rubber producers as well as to our merchants. The rubber could leave Pará or Mañaos sold directly to the consumers by the *seringueros*, who might form a co-operative organization for that purpose, dispensing with onerous intermediaries."

A CONSULAR REPORT ON MALAY RUBBER CONDITIONS.

The United States consul general at Singapore, Mr. Edwin S. Cunningham, in a report which appeared in the Daily Consular Reports of December 12 last, has this paragraph on present rubber conditions in the Malay States:

"Within six months, the price of the best grade of plantation rubber, the second item of importance in the country's production, fell from $102 to $51 per 100 pounds, and lower qualities suffered more than a corresponding decline. A further decline has occurred since June 30 and every branch of business in this section is interested in the question whether still lower prices are to come. The results have been the introduction of more economical methods in the rubber industry and a decline in rubber shares, almost universally held and heretofore considered an excellent investment. Fortunately, tho the unexpected and abnormal depression has been severely felt, the country is too rich in resources to be seriously affected for a long period by a depreciation in the price of one article.

THE RUBBER TRADE IN BOSTON.

By a Resident Correspondent.

AS a rule, business in manufacturing lines may be stated as "so-so." While some houses report good trade, most of them at this writing are quieting down, or have already done so, for the Christmas and New Year holidays. Many of them, however, are quietly preparing for a speeding up soon after 1914 makes its appearance. The tire manufacturers, who have had a fine business for the greater part of the year, are restricting their product somewhat, but claim that their present output just about balances the day-by-day demand. That it should be better is the opinion of many, when the mild weather and the absence of snow in New England is taken into consideration, for many automobile owners are running their machines much later than usual.

The clothing men have had a good season, with plenty of orders on hand for early delivery. Mechanicals are not active. Druggists' goods makers have been busy. Judging by the great variety and immense stocks of rubber toys displayed in the department stores, the makers of these lines must also have had an excellent season.

* * *

The Boston Belting Co. makes an important change the first of the year. After doing their sales and shipping business at a downtown location for more than half a century, they are removing their general offices and warerooms to their factory in Roxbury. Several buildings connected with their manufacturing plant have been combined, remodeled and specially adapted to the growing needs of these departments, and it is claimed that with more room and better facilities the concern will be able to serve its patrons with greater promptness and satisfaction.

It sounds like a long way off to say their new wareroom location is in Roxbury, but it is really less than twenty minutes from Boston's business center or any of the stations of the tunnel or subway, so that, taking time into consideration, the new location is really nearer and more convenient than the old, for many of their customers. In the matter of shipping, the warerooms are much nearer the Ruggles street and the Boylston street freight yards of the N. Y., N. H. & H. railroad, which takes the lion's share of their shipments.

As was said above, this company has had downtown headquarters for many years, if not during the whole life of the company, since its establishment in 1828. A printed advertisement, framed and hung in Mr. Elder's office, shows that in 1855 the office was at the corner of Summer and Chauncy streets, and since then the company has occupied three locations on Devonshire street, the one now being vacated having been its headquarters for twenty-eight years.

But even now, downtown will not be entirely abandoned. An office will be maintained, for a time at least, at Room 602 Columbian National Fire Insurance Building, 77 Franklin street. This is mainly for the convenience of the city salesmen and an information point for out-of-town customers. The company is instructing its patrons to address all mail to Box B, Roxbury Crossing Station, Boston.

* * *

The great plant of the Apsley Rubber Co. at Hudson will soon be run by electricity and the present steam-driven machinery will be actuated by power brought many miles from another state for the purpose. Already the box factory, the clothing mill and the last making shop are supplied with such power, and gradually the heavy mills and calenders will be fitted with individual motors. Such a transformation of course is a matter of much detail, and must be gradual, if the regular work of the mill is to go on uninterruptedly, but before long the mill at Hudson will be run by the Connecticut River. The great electrical plant is situated at Brattleboro, Vermont, and the current conveyed by cables for many miles to the Apsley plant.

And in this connection it may be of interest to know that the Connecticut River Power Co. was developed largely through the exertions of the late Charles W. Dunham, at one time senior partner of Dunham Bros., who were for several years New England distributors of Mishawaka rubbers and wool boots. Mr. Dunham spent a large part of his time in overseeing the building of the big dam across the Connecticut at a point a little below Brattleboro. He died, however, before the enterprise was fully completed.

* * *

Colonel Frank L. Locke, for many years superintendent of the Boston Rubber Shoe Co.'s plants at Malden and Edgeworth, is gaining deserved popularity and winning encomiums for his most successful management of the Boston Young Men's Christian Union in this city. Colonel Locke succeeded the venerable William H. Baldwin, through whose exertions this institution became famous for its influence upon Boston's young men, and it is saying volumes to state that "Father Baldwin" had a worthy successor in Colonel Locke, who has the personal friendship of every frequenter of the pleasant reception rooms, the various classrooms, or the splendid gymnasium of the association. The Colonel is an easy and convincing speaker, and is particularly happy in introducing many noted lecturers who favor the association, and on frequent Sundays and on all holidays Colonel Locke is present at the rooms, holding a reception, superintending an entertainment or overseeing a holiday celebration or a warm weather outing.

* * *

James H. Stedman, who is treasurer of the Monatiquot Rubber Works Co., of South Braintree, was recently honored by the governor, who appointed him a member of the Massachusetts Board of Prison Commissioners. The Boston Transcript mentions the nomination in the following editorial: "In the nominations today to the Board of Prison Commissioners and to the Board of Parole and Advisory Board of Pardons, Governor Foss lengthens the long list of excellent appointments which he has made during his three years on Beacon Hill. As a manufacturer Mr. Stedman will bring to the Board of Prison Commissioners experience and practical knowledge of a kind certain to prove useful in its deliberations."

THE RUBBER TRADE IN AKRON.

By a Resident Correspondent.

IN spite of rumors of business depression from other parts of the country, and altho there has been the usual cessation of activities in Akron incident to this time of the year, business conditions here are most satisfactory and the city has every element necessary to its prosperity. The Akron Chamber of Commerce, organized for active service about five years ago, has devoted its energies to the upbuilding of the city from a civic standpoint, with the result that it has become a better place in which to live and has therefore been looked upon as an attractive industrial location; and the growth of the rubber industry has formed an important element in the city's prosperity.

* * *

The annual meeting of stockholders of the Goodyear Tire & Rubber Co., held on December 1, resulted in the re-election of the following officers: F. A. Seiberling, president; C. W. Seiberling, vice-president; G. M. Stadelman, secretary, and F. H. Adams, treasurer. A report read at that meeting showed a gross business done by the company for the year amounting to $32,500,000, with net sales of $29,000,000, at a profit of $2,-

041,000. Of these earnings $603,192 represents a 33 per cent. dividend paid for the year on common stock, a decided drop from the $3,001,000 earnings on this stock for the year 1912, when the gross business of the company amounted to $25,232,000 —this drop being due in a great measure to the flood and strike of last spring.

A circular sent out by this company early in December announces that its heavy tourist inner tube will in the future be made 30 per cent. thicker than the ordinary tube, with the reinforced rim side 50 per cent. thicker than the balance of the tube, protecting it from rim dust and chafing, reducing pinching to a minimum and resulting in extra tube strength and extra mileage.

A "Safety First" battalion of 115 foremen has been organized at this company's factory, to patrol the premises constantly looking for anything which may be dangerous in operation and suggesting safety devices, also to instruct workmen. It is inevitable that among so many workmen as are required to operate a factory so extensive as the Goodyear, accidents will happen, and the aim is to reduce these to the smallest number possible, the safeguarding of the lives and well-being of its employes being held by the company—as stated in a recent address of President Seiberling—"as a high moral obligation."

* * *

Reports by the local tax board show an increase in the value of factories and equipment, notable among these gains being a 25 per cent. increase in the valuation of the property of the B. F. Goodrich Co. over last year's assessed value. The taxes paid by this company constitute one-fifth of the entire tax receipts for the city of Akron and cover almost one-eighth of the property located in Summit County.

* * *

Construction work is now under way on two additional wings to the factory of the Firestone Tire & Rubber Co., and these will probably be ready for occupancy early in the spring, when an extra floor will be utilized for office space. These new wings are of steel and concrete, with a facing of light brick, and are said to be absolutely fireproof.

* * *

The Loewenthal Co., the large scrap rubber concern, has secured the services of Mr. Leo Meyer in connection with its Akron office. Mr. Meyer has had considerable experience in this line and will constitute a valuable addition to the company's force. His time is to be devoted exclusively to keeping in close touch with the various factories in Akron and vicinity.

* * *

Fifteen checks were taken from the office of The Motz Tire & Rubber Co. on the night of December 19, by a burglar, who gained entrance to the office on the first floor by breaking a window in the rear of the building. Proceeding upstairs he made a thorough search of all the drawers on the floor, using a hatchet to chop open those that were locked. In the cashier's drawer he found the checks. When the members of the office force arrived in the morning the office floor was covered with burnt papers, the burglar having evidently not used the electric lights in the building, but had used matches and lighted papers to find his way about the office. It was evidently the work of an amateur. All of the banks in the city were notified of the robbery and payment stopped on the checks.

* * *

The Kelly-Springfield Tire & Rubber Co. anticipates reorganization, change of name and distribution of surplus, which matters will be taken up at the annual meeting December 26.

* * *

Certain stockholders of The Royal Rubber Co. have filed in the Common Pleas Court of Summit County at Akron, a petition declaring that the company is insolvent, owing fully $50,000, and asking that agreements made by the officers of the company for the sale of the plant and real estate to The Dutch Rubber Co. be set aside and the property sold to meet liabilities. The plaintiffs are Alvin L. Neiswanger, C. R. Musser, Rocco Masino, and E. B. Foltz, who allege that they own 58 of the 1,561 shares of Royal Rubber Co. stock. Defendants named are the Royal Rubber Co., The Dutch Rubber Co., A. M. Stockwell of New York City and his attorney.

The petition also alleges that the Royal Rubber Co. was capitalized at $200,000, divided into 2,000 shares of $100 par value each, that the plant has been idle for a year and that the buildings are suffering injury through disuse; that no dividends were ever paid by the company, which authorized a $100,000 bond issue, secured by mortgage on the real estate, and that $90,000 of bonds have been issued. It is further claimed that contracts were entered into regarding the formation of a new company to be known as the Dutch Rubber Co., the transfer of certain shares of stock in this new concern, with the payment of a specified amount in cash, to be accepted by the Royal Rubber Co. in return for the title to its realty and assets; that only a part of the agreement regarding the organization was carried out, and that the deed to the real estate and plant of the Royal Rubber Co. conveyed by certain officers of the company had not been authorized by the Board of Directors. W. E. Pardee and J. A. H. Meyers were appointed receivers.

THE RUBBER TRADE IN CHICAGO.

By a Resident Correspondent.

THE rubber trade of Chicago, with its usual optimism, is looking forward to a prosperous New Year. But just what the new year will bring is problematical. That there is a general slackness of business at present in most branches of the trade cannot be gainsaid. Among Chicago men there seems to be a wide diversity of opinion as to the cause. Most dealers are agreed that there can be no change in legislation without a coresponding depression. Jobbers say that specifications for 1914 will be delayed as long as possible, or until there is more certainty as to the working out of the new legislation. The story of the trade during the past month has been, in a large number of lines, the story of the weather, and the weather has been more unfavorable to some lines of trade than for many years. For the past four weeks, when according to the almanac the mercury should be near the zero mark, with slush and snow on the ground, the weather has remained mild, with little rain and no snow. The rubber raincoat and the overshoe people have been brought to a state verging on despair.

* * *

W. E. Carver, of the Rubber Manufacturing & Distributing Co., 207 West Monroe street, said: "I have been in the rubber business for many years, but never have I seen such a season. With conditions at the beginning of the fall leading us all to think that we were going to have an excellent winter's trade, the weather has remained like summer for week after week, until here we are in what should be the middle of the winter, without any occasion to wear rubbers or overshoes, and indeed without enough bad weather in sight to warrant the retailers in putting in extra stocks. Yet apart from footwear and clothing the trade is fairly optimistic."

* * *

F. B. Henderson, of the Mechanical Rubber Co., said that the trade on all lines of mechanical goods had improved in a marked degree during the past month and that he did not look for a slump either after the first of the year or at any time during the next twelve months.

The Gutta Percha & Rubber Co. reported that business was good and that they expected it to remain good. They have recently received several fine orders for belting from large contracting firms building grain elevators in the west and report that they expect more building of mills and elevators in that section the coming spring than for many years. This company makes a specialty of furnishing combination rubber belting for grain elevators and flour mills.

The rubber belting business generally has been suffering from labor troubles at the copper mines in Michigan and in Mexico. Chicago firms have in the past had an excellent trade in these sections, but have abandoned these fields for the present, until the trouble is permanently adjusted. Of course the trouble in Mexico is not labor, strictly speaking, but the conditions in that country are so chaotic owing to the civil wars that not enough labor can be secured to operate the mines. In Michigan the trouble between the guards and the strikers continues to make the working of the mines impossible. Many thousands of dollars worth of belting has been bought by the mines in these regions every year, and Chicago, owing to her advantageous commercial position, has secured most of the orders for large shipments.

* * *

There is one branch of the trade that has not suffered any depression—and that is tires. Following the announcement in November by the B. F. Goodrich Co. of a reduction averaging about 15 per cent. in the price of their tires, the Chicago branches of this company became centers of great activity. Other companies soon followed in the price reduction. Another feature that has tended to increase the sale of tires has been the abnormally open winter that has been enjoyed in this part of the west, making it not only possible but agreeable to use automobiles long after they would normally be put away for the winter.

* * *

The W. D. Allen Manufacturing Co., the enterprising brass manufacturers of this city, have just purchased the patterns, tools, stock and good will of the lawn sprinkler business of the Hotchkiss-Peck Mfg. Co., of Bridgeport, and are now the only manufacturers of the full line of lawn sprinklers in the United States. They make over fifty-seven varieties, thus giving the jobber an opportunity if he so elects to buy his entire line from one factory. Some of the goods formerly made by the Bridgeport concern will be perpetuated by the Allen company, which will continue to make the Eureka, Universal and Newport sprinklers.

Among the new goods being brought out by the Allen company might be mentioned the U. S. A. nozzle, the operation

FIG. 1. SPRAY.

FIG. 2. STRAIGHT STREAM.

FIG. 3. STEEL CLAMP.

of which is shown in the two accompanying cuts. A slight pressure on the thumb piece produces a fine spray, as shown in cut No. 1, while a further pressure develops a straight stream, as shown in cut No. 2, and a variety of sprays and streams can be obtained by varying the pressure.

Another new article which this company has recently brought out is a steel clamp, shown in cut No. 3. The company carries a full line of samples—both at its Chicago headquarters at 133 West Lake street and also at its New York branch at 69 Warren street.

* * *

The Fiberoid Rubber Co. is putting out a new rubber mat in lots of 500, at $20 per hundred. They are so constructed that they can be rolled up and sent by mail as premiums. The company has received orders for several thousand.

* * *

Mr. Curwen, Chicago manager of the Boston Belting Co., returned from a trip in Wisconsin about the middle of December. He found the paper milling men quite optimistic, for all mills were running. Hence the outlook for the New Year, in the belting line at least, looks promising.

* * *

Mr. S. F. Denny, the western sales manager for the Home Rubber Co., recently returned from a trip through the west and southwest, and reported prospects for 1914 in these sections of the country, especially in the mechanical line, to be quite favorable.

THE RUBBER TRADE IN RHODE ISLAND.

By a Resident Correspondent.

THE rubber manufacturers throughout Rhode Island are closing the season with satisfaction and are especially optimistic regarding the coming year. Practically all of the plants are preparing for a greater business year than the one just closing, tho 1913 is acknowledged to have been generally prosperous. Prices, apart from tires, have held firm through the entire twelve months, and as a whole the factories are returning good profits. Most of the plants throughout the State are running over time, or with two shifts in different departments, and there is said to be enough work on hand to warrant the starting of additional departments on the two-shift basis.

* * *

Much interest was manifested in the pledgee's sale of a large amount of the stock of the Walpole Rubber Co. in this city on December 15, which had been held as collateral by the defunct Atlantic National Bank as security on notes. This stock was given to the bank as collateral for loans, and when the notes came due and were not paid the stock was placed at auction by Receiver Curtis of the bank. The common stock, of which 691 shares were disposed of—which sold eight months ago for $65 a share and which is supposed to have a par value of $100—brought less than half a cent a share. Seven blocks of the preferred stock of the company were sold for a total of $5,405. One block of 500 shares of preferred Walpole stock was continued to a later date and the same disposition was made of 1,300 shares of common stock of the same concern. The highest price paid was $2,250 for 150 shares of Walpole preferred, purchased by Ernest W. Tinkham. Louie D. Pierce paid $1 for one lot of 293 shares of Walpole common. Michael J. Houlihan, vice-president of the Walpole Tire & Rubber Co., without any opposition, bought 250 shares, with a par value of $25,000, for $1, and Percy W. Gardner, attorney for Receiver Curtis was the purchaser of several blocks of the preferred stock.

Notwithstanding the burden of expense imposed upon the stock of the Walpole Tire & Rubber Co. by the present receivership, the stockholders' committee declares that the corporation is making big money and the stockholders are urged to retain their stock pending the outcome of plans

for a reorganization. According to this committee, the net earnings of the Walpole concern for the three months, August to October, were approximately $20,000 per month, or at the rate of $240,000 per year. This income, reached after charging off $15,000 for interest charges and $32,000 for depreciation, the committee declares is ample to pay seven per cent. on all present outstanding preferred and common stock.

* * *

The announcement has been made that the Universal Winding Co. is soon to move its plant from 99 Stewart street, this city, to the city of Cranston, where an exemption from taxation for ten years has been voted. The concern has just purchased property on the banks of the Pawtuxet river comprising about twelve acres, with 21 buildings, all of modern construction. The new plant is considerably larger than the present one and will allow of a general expansion in all departments. The firm now employs upwards of 400 hands and it is expected that this number will be increased to 750 in a short time after the company is settled in its new location.

* * *

Surveys of the grounds at the factory of the Consumers' Rubber Co. at Wood Street, Bristol, were recently made by parties from Boston and Pittsfield, Massachusetts, who are seeking a new rubber mill site. No definite information could be obtained from any of the parties concerned.

On December 18 a dividend of 30 per cent. was declared by the referee in bankruptcy and this is being distributed among the creditors of the concern. It is expected that another dividend will be declared in the near future.

* * *

Extensive changes are being made in the office arrangements at the plant of the Davol Rubber Co., Point street, Providence. The new offices are to be located on the second floor of the old building, directly over the present office. There will be several rooms in the new suite and all will be handsomely finished in paneling in natural woods.

* * *

A cylindrical tank, eight feet in diameter and weighing 15 tons, which is to be used in connection with the new method of vulcanizing the product of the factory of the National India Rubber Co., at Bristol, and which came from Buffalo, N. Y., was placed in position early in the month.

The plant of this company closed on December 24 for the regular annual inventory of stock and will reopen January 5.

* * *

Arthur H. Emerson, secretary-treasurer of the National India Rubber Co., of Bristol, was married to Miss Adele Deming, of Chicago, at St. Paul's Episcopal church, on November 18. The brother of the bridegroom, Robert S. Emerson, who is receiver of the Consumers' Rubber Co., of Bristol, was best man. A reception followed at the home of the bride's mother. Mr. and Mrs. Emerson, on their return from an extended wedding trip, will take up their home on High street, Bristol.

C. A. Ostby, for several years draughtsman at the factory of the National company, has been recently promoted to the position of master mechanic, succeeding Oliver H. Blaisdell, who has been master mechanic and chief engineer for 28 years. Mr. Blaisdell will continue in the capacity of consulting engineer, while Frederick G. Blaisdell becomes the chief engineer.

The Cataract Rubber Co., of Wooster, Ohio, announces the appointment of H. C. Gentry as special factory representative, with headquarters in New York, at 1608 Broadway, from which location the Cataract tire is distributed by Meyers & Grayson, representatives for New York City.

THE RUBBER TRADE IN SAN FRANCISCO.

By a Resident Correspondent.

THERE is some difference of opinion concerning the general business situation. Collections are rather slow, and this is traceable directly to the financial disturbance throughout the entire country. But there has been too much prosperity in this state to permit anything like that to hold business back to any considerable extent. The production of fruit, minerals and oil last year was exceptional, and these are the things on which the state depends for its general prosperity.

Some of those who follow the rubber business take the attitude that it will require more than general prosperity to specifically improve this industry. One reason advanced is that in the first place there are so many firms here to divide up the business that it would be practically impossible for any one rubber establishment to enjoy a great increase of trade. Another reason is that until there are many more factories in the state there can be no large market for mechanical rubber goods. This is in no sense a manufacturing state, altho people who study conditions say that within five years great factories will be established, and that cheap labor, augmented by cheap electric power in unlimited abundance, will enable the state successfully to compete with any other in the Union in respect to manufactures.

* * *

It is apparent that the days of the independent jobbing house for the handling of rubber lines in San Francisco are numbered. Perhaps this is true everywhere, but it is certain that the great firms which manufacture have made up their minds to handle their business on this coast direct from the factory. This results in forcing the jobbers out. It is also being followed by a consequence which the big firms did not anticipate, and that is: The local jobber has an established trade along certain lines, and rather than lose that trade he has in some instances started into the manufacture of those particular articles himself; and with the strong asset to commence with that he already has the customers, he can come very near holding them, because it appears that even under present conditions a local factory, however small, can specialize and nearly, if not quite, meet the prices of the big houses. In other words, the consolidation of the big factories and their direct representation is resulting in the springing up of small factories which take the place formerly occupied by the jobbing houses.

* * *

A hornet's nest has been stirred up in Oakland, owing to difficulties arising from a bid to the city for fire hose. It seems that the bid made by the B. F. Goodrich Co. was 71 cents, and of the American Rubber Co. and the Bowers Rubber Works 75 and 76 cents, respectively. The fire chief recommended that the contract be let either to the Bowers or the American company. Both of these are local concerns having local factories, and the B. F. Goodrich Co. filed a strong protest, claiming that their bid, altho lower and for exactly the same kind of hose, had been completely irnoged. But the city council has voted to uphold the fire chief's recommendation, and the courts may be resorted to before the matter is finally settled.

* * *

The western branch houses of the B. F. Goodrich Co. and the Diamond Rubber Co. are now located together under one roof in the big building at the corner of Fremont and Mission streets. Both of these companies have a large number of branch stores throughout the entire coast, and these will be consolidated, and it can be readily seen what a saving in expense this will mean, with practically the same convenience to the automobile owner, and a benefit by way

of reduced prices. It is estimated that the companies will effect a 20 per cent. saving in expense. Harry Miller will continue as Pacific Coast manager for the B. F. Goodrich Co. and C. E. Cook will act as Pacific Coast manager of the company's mechanical rubber goods department, while C. E. Mathewson will continue as Pacific Coast manager for the Diamond Rubber Co., having charge of both the tire and mechanical lines.

* * *

The Firestone Tire & Rubber Co. has opened a direct factory branch in Oakland, the city just across the bay from San Francisco. In order to provide suitable accommodations the store formerly occupied by Holmes & Olson at Twelfth and Jackson streets has been taken over, improvements have been made in the building and a complete equipment is being installed, which will enable the firm to duplicate the excellent service afforded by the San Francisco branch. Mr. W. H. Bell, the San Francisco manager, says that it is the company's intention to give just as good service on the Pacific Coast as is given to automobilists and truck owners on the Atlantic Coast by this company. The manager of the new branch is H. E. Esterly, who has been connected with the San Francisco branch during the past year. He has been with the company since its organization and has held positions at St. Louis, Chicago and New York.

* * *

Wakefield Baker, head of the firm of Baker & Hamilton, and a millionaire, dropped dead one evening last week of heart failure. He was 47 years of age and is survived by a widow and three children. His firm recently entered the automobile tire business, having taken the agency for Savage tires.

* * *

Harry Kenyon, general manager of the C. Kenyon Co., clothing manufacturers, is now visiting on the coast, and he is accompanied by Max Magnus, the Chicago manager.

THE RESULT OF MR. TUCKER'S PRIZE OFFER.

In the December number of THE INDIA RUBBER WORLD, Mr. Quincy Tucker, of Boston, offered two prizes—one of $5 for the best description of Wickham-smoked sheet and Da Costa-smoked sheet in contrast with the superficially smoked sheet coming from the East, and a second prize of $2 for the best article on immature or weak plantation rubber—neither article to exceed 250 words. Mr. Tucker writes that there was no winner of the first prize, but that the second prize was taken by Mr. George B. Bradshaw, manager of the Bradshaw Rubber Co., Roselle Park, N. J. Here is Mr. Bradshaw's paragraph on immature plantation rubber:

"The properly smoked sheet from mature trees can be immediately distinguished by the tear. No matter in what direction torn, the edge will be ragged and will display stringers as it is being torn. This property persists throughout the making up of smoked sheet into goods and shows up in the finished article if it has high enough percentage of rubber. Only smoked sheet displaying a ragged tear is fit for high class goods and for rubber cement."

Mr. Tucker adds his own description of the Wickham and Da Costa smoked sheet rubber, which is here reproduced:

"Wickham-smoked cured rubber is intended to imitate the Brazilian method of film after film of smoked rubber, but mechanically smoked in a hollow revolving cylinder (or modified apparatus). Da Costa-smoked rubber is coagulated by forcing smoke into a large receptacle of latex by the aid of a steam jet, whereupon in about twenty minutes a large clot of spongy rubber is formed. To make any rubber into sheet form it is then necessary to put it through rollers revolving at the same speed. The present day Plantation smoked sheet is coagulated with acetic acid first, and having been made into sheet form as previously described, it is superficially smoked."

AUTO SHOWS AND THE TIRE MAKERS.

AS the time for the annual automobile shows draws near (the New York show being held in the Grand Central Palace from January 3-10, and the Chicago show in the Coliseum and Armory from January 24-31), the trade is wondering what effect the withdrawal of a number of the more prominent tire manufacturers will have on future exhibits. Manufacturers claim that returns are not commensurate with the expenditure necessary for obtaining suitable floor space, for shipping exhibits, etc., and for all the incidentals that usually accompany such an enterprise.

The highest price for floor space at the New York show is $1.50 per square foot, and at the Chicago show $1.25 per square foot. Tire exhibitors seldom have more than 200 square feet, so that this item of expense is generally kept well within $300. In most cases the business done pays for the floor space and shipping expenses many times over, so that there must be another reason for this general withdrawal.

As a matter of fact the actual cost of making the exhibit is not even a small part of the total expense that is often incurred by many exhibitors during the time of the show. A very large item of expense is the great amount of advertising space taken in local newspapers and in magazines, besides the enormous amount of advertising matter wastefully distributed to souvenir seekers and catalog collectors. The seat of the trouble, however, cannot be laid at the door of advertising—if this department is conducted properly.

But probably the chief cause of the withdrawal of so many former tire exhibitors is the great expense involved in having so large a part of the sales force in the exhibition city during the time covered by the show and the necessary preparations, with all the incidental entertainment—the banquets, dinners and parties that seem an inevitable accompaniment of these gatherings, and which when conducted with a free hand reach in the aggregate very large sums.

Among the tire manufacturing concerns which will not exhibit at the National Automobile Shows this year are the Goodyear, Goodrich, Diamond, Swinehart, Firestone, Fisk, Kelly-Springfield, Ajax-Grieb, Federal, United States, Michelin and the Knight Tire & Rubber Co. The present withdrawal of these tire interests follows that of the motor truck manufacturers, and the results will be closely watched. If no falling off in business results from this move, it is safe to predict that the automobile shows will have fewer tire and rubber exhibitors in the future, and this will mean a saving of many thousands of dollars to the manufacturers.

Notwithstanding the withdrawal of the tire companies mentioned above, a number of companies will exhibit in one or both of these shows. They are as follows: Braender Rubber & Tire Co., Cataract Rubber Co., Columb Tires Import Co., Dayton Rubber Manufacturing Co., Double Fabric Tire Co., Empire Rubber & Tire Co., Miller Rubber Co., McGraw Tire & Rubber Co., Newmastic Co., Overman Tire Co., Pennsylvania Rubber Co., and Thermoid Rubber Co. In addition there are a number of rubber companies making certain auto accessories that also intend to exhibit, as given below: Asbestos & Rubber Works of America, F. S. Carr Co., Essex Rubber Co., Howe Rubber Co., L. J. Mutty Co., National India Rubber Co., Standard Woven Fabric Co., United & Globe Rubber Manufacturing Cos., and the Voorhees Rubber Manufacturing Co.

Should be on every rubber man's desk—Crude Rubber and Compounding Ingredients; Rubber Country of the Amazon; Rubber Trade Directory of the World.

CONGRESSMAN LINDQUIST'S REMARKABLE BILL.

THERE have been at one time or another a great many extraordinary bills introduced into the House of Representatives, but few of them have ever surpassed in remarkable features the bill known as "H. R. 10080," introduced into the House on December 8 last by Representative F. O. Lindquist, of Michigan. The bill is described as follows: "A bill providing for the labeling, marking and tagging of all fabrics, leather and rubber goods, as hereinafter designated, and providing for the fumigation of same. To be enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that it shall be unlawful for any person to misrepresent in manufacturing, selling, trading or exchanging within any territory or the District of Columbia any fabric or article hereinafter named of wool, cotton, silk, linen, fibre, leather or rubber, in whole or in part, which is misbranded within the meaning of this act, to wit: Men's, women's and children's clothing . . . boots, shoes, sandals . . . and all articles of rubber footwear; and any person who shall violate any of the provisions of this section shall be guilty of a misdemeanor, and for the first offense shall, upon conviction thereof, be fined not to exceed $2,000, or shall be sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court; and for such subsequent conviction thereof shall be fined not to exceed $5,000, or sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court." The bill then goes on to require "that all articles composed wholly of unadulterated rubber shall be marked, tagged or labeled in plain letters 'unadulterated rubber'; and that all articles composed in part of unadulterated rubber and in part of adulterated rubber, or such other vegetable, animal or mineral substances shall be marked, tagged or labeled in plain letters 'adulterated' or 'substituted rubber,' and the mark, tag, or label shall show all the constituents contained therein: *Provided*, That it shall not be required to separately mark, tag, or label any textile fabric used in the manufacture of the shoe, and that in all articles or fabrics composed in part of pure wool and shoddy the percentage of these constituents need not be stated."

Perhaps the features incorporated in Mr. Lindquist's bill, remarkable as they are, are not so interesting as the address he delivered in support of his measure. A verbatim report of his speech contains the following paragraph:

"You will also note that my bill includes rubber footwear. I think that it is extremely important that the manufacturers of rubbers should place a label upon their products, because the greater percentage of rubber shoes that are manufactured today are made from old adulterated, cast-off rubbers that are picked up in the alleys back of hospitals and pest houses, and find their way back to the manufacturer, and again are remelted and remanufactured, and again sold over the counter to the consuming public under the pretense of their being made from genuine new rubber."

Just why there should be a great accumulation of cast-off rubbers back of hospitals and pest houses is not quite clear. The natural inference must be that all those unfortunate people who are taken to hospitals and pest houses enter not only wearing a pair of rubbers, but carrying several extra pairs with them, all of which are forthwith hurled from the back windows into the waiting alley. Possibly this is the custom at these institutions, but if so the Congressman is the first to discover it. He goes on further to dilate on the poor quality of modern rubber footwear. The stenographer reports him as follows:

"It is hardly possible for me to purchase a pair of rubbers for my little girl or boy that will give service for more than a couple of weeks before they are worn through. This, I am sure, is due entirely to the fact that the product from which the rubbers are made has been previously gone through the course of manufacture time and time again. I remember well when I was a small boy, my parents bought me one pair of rubbers in the fall, and they would invariably last through the winter. It seems almost impossible today to purchase a pair of rubbers for my children of the same wearing quality that my parents bought me thirty years ago. Now, then, if the truth was known, there are perhaps millions of cases of sickness prevailing which I have no doubt could be traced back to the very manufacturer who is unscrupulously misrepresenting his rubber goods."

It is a somewhat prevalent habit to berate all things modern as compared with the products of an earlier generation, but as a matter of fact, the rubber footwear of today is quite the equal of the rubber footwear of thirty years ago, as there were more companies and keener competition in this line at that time than is the case today, to say nothing of the improved methods which obtain today in footwear factories, and the better prices that the manufacturers are receiving. The legislator's statement that "if the truth was known, perhaps millions of cases of sickness could be traced back" to the maker of rubber boots and shoes, is highly interesting, and Congress should be called upon at once to make an adequate appropriation and appoint the necessary committees to trace back these "millions of cases." This is certainly vastly more important than the tariff or the currency or any other merely commercial question that has yet come before that learned body of men. The congressman's whole speech in advocacy of his measure was interesting, but there is space here only to quote one other little clause in which he describes what a second is. "A second," he says, "is an article which has been damaged or mutilated in some way or other in the course of construction, and before it is permitted to be placed on sale it has been mended in such a way as to deceive the public."

Now manufacturers who make shoes of anything except pure rubber will be liable to a fine not to exceed $5,000, or a sentence to one year's imprisonment, or both, unless they label such shoes "adulterated" and give on the label or tag a list of all the "adulterants," such as litharge, sulphur, carbon black, whiting or other ingredients.

What will the manufacturers do about it? This reminds the writer of the time when a certain well-known rubber manufacturer in Connecticut had a contract to supply ponchos to the United States Government. After the award of the contract, and after some goods had been delivered, the inspectors refused to receive the goods, claiming that the waterproofing material should be composed of at least 75 per cent. pure rubber. The manufacturer asked where the ponchos were going. Some were for the Philippines and others for Alaska, tho most were for army posts in this country. The manufacturer said: "If these were made of 75 per cent. pure rubber, you would have to send four men to hold the corners of each poncho sent to Alaska, so it wouldn't break in pieces like glass. And in the Philippines four men would be needed to hold each poncho flat and separate, for if laid one on another they would melt and stick in one solid mass. The inspector finally passed the ponchos without ascertaining what percentage of "pure rubber" they contained.

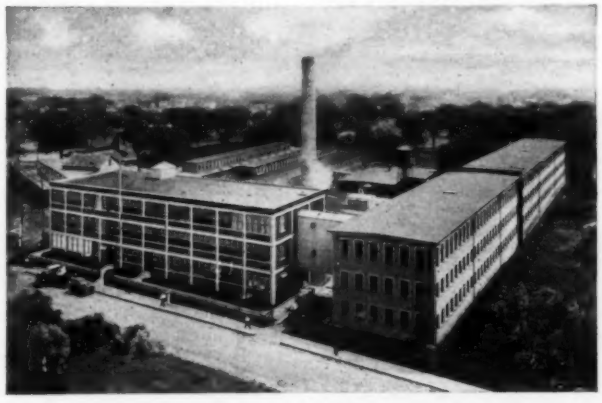
Mr. Lindquist probably does not know of the early experiments in making all rubber footwear in a Boston factory, rubbers which ran like molasses in summer and were as brittle as glass bottles in winter. He still sighs for pure, unadulterated rubber as the sole ingredient, but he doesn't know how lucky he is to get overshoes which are only partly made of rubber.

But rubber footwear producers may well keep an eye on this Pure Shoe bill, and at least inform their Congressmen of the foolishness of such a law.

The Bowling League of the Mechanical Rubber Co., of Cleveland, Ohio, consists of eight teams, made up from the various departments. According to the printed schedule for the season 1913-14, about eight matches a month are played off. The committee is composed of R. Beynon, W. Denker, F. Densler, H. J. Kappler, D. Jones and J. H. Pettersson.

THE REMODELED STOUGHTON PLANT.

THE recent additions to the manufacturing plant of the Stoughton Rubber Co., the rearrangement of its work, and the relocation of the various departments have made this one of the finest establishments of its kind in the country.



PHOTOGRAPHIC VIEW OF PRESENT FACTORY.

The picture showing the entire group of buildings is a novelty in its way. Usually illustrations of this sort—called birds-eye views—are carefully worked out drawings made from plans and photographs of the buildings taken from the ground or from buildings opposite. This, however, is not the case with this picture. It is from an actual photograph, taken from the top of an extension tower made portable for the very purpose of photographing from a high point and thus obtaining a real and not a theoretical or ideal picture.

A GLIMPSE OF THE DRAFTING AND CUTTING DEPARTMENT.

This reproduction shows in the foreground the two latest additions. The one on the left is 150 x 50 feet, and three stories high, of concrete fireproof construction, with fire walls separating its different sections. This building contains the offices and bookkeeping department, the receiving and shipping rooms, and the inspection department. All goods and supplies are delivered at the rear, where an outside elevator takes them to the receiving room at the top of the building. Here, with a fine north light, the fabrics used are carefully inspected and picked, and afterwards shrunk and finished for the calenders and spreading machines. All goods in the entire factory go forward from one process to another, with no backward step. From the inspection room the fabrics go across the bridge to the other new building shown in the foreground of the picture. This new part is 175 x 45 feet, and joins the older structure, making a total length of 225 feet.

GENERAL VIEW OF A ROOM DEVOTED TO "CRAVENETTE" RAIN COATS.

The cloth is here cut for the weather coat department, the cutting being done by electric knives. Each coat has a tag, each section of which bears the number of the garment. A coupon is taken from this tag by every operator who does any portion of the work, and these coupons are turned in by the employe for his pay. Here the trimmings for each coat are placed with the cut cloth, being then sent down one story to the making department, where the several operations by hand or machine are done; the garment next goes to the ground floor where, after being finished, it is inspected and then turned over to the shipping department. It is claimed for this company that it has a larger amount of floor space devoted exclusively to cravenetted coats for men than any other factory in the world.

A VIEW SHOWING STITCHING TABLES.

The old establishment had three old chimneys, but these have been replaced by a fine stack of Custodis brick 125 feet high, a landmark for the vicinity. A rear building is devoted to the manufacture of rubber-coated slip-ons. Another contains the calenders and grinders, while the building shown directly in the rear of the chimney is the spreading department, separated by a bridge from the other workshops of the establishment.

A SECTION OF HAND TAILORING DEPARTMENT.

They have recently added a new power plant, resetting the old boilers and installing new ones, and have put in Rice & Sargent 400 H. P. equipment, doing away with the old direct-gear drive and replacing it with a modern Morse Silent-drive for the main line of shafting for mills and calenders. Both the boiler and engine rooms have been enlarged to accommodate this new equipment, which constitutes the latest variety of power plant.

As has been said above, the company devotes itself exclusively to the manufacture of men's and boys' rain coats and weather coats of cravenetted, gaberdine, worsted and woolen fabrics and rubber coats. Its product goes to every part of this country and also to the export trade. Some idea of the details of this "daylight factory" may be formed by a study of the photographs here shown of its various departments.

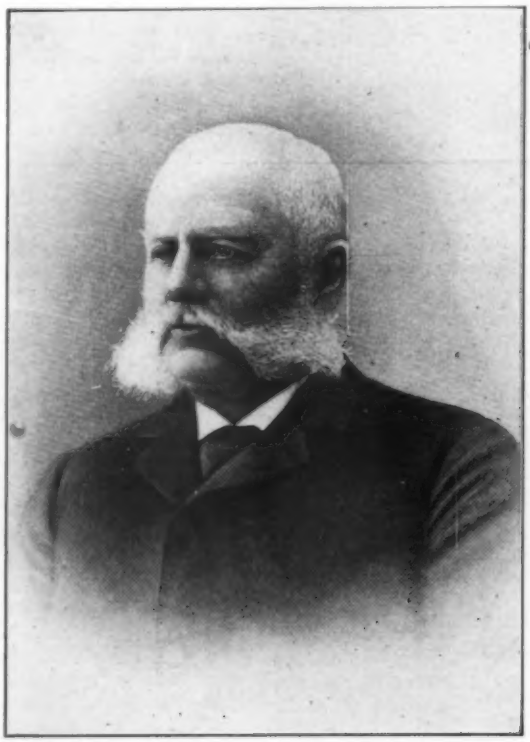
FINISHING DEPARTMENT.

Obituary Record.

GEORGE H. HOOD.

GEORGE H. HOOD, who for nearly forty years was a leading figure in American rubber manufacture, died at his home in Hamilton, Massachusetts, on December 3, in his seventy-ninth year.

Mr. Hood might be classed among the pioneers of the American rubber trade. When as a young man just reaching his majority he entered the rubber business, in the 50's, Charles Goodyear was not only alive but was still extremely active in the development of the possibilities of rubber. Soon after the close of the civil war Mr. Hood embarked on an independent rubber business, in which he continued until 1870, when he joined with the late Robert D. Evans in the formation of the Eagle Rubber Co., of which he was general manager. Three years later the American Rubber Co. was formed as a Boston distributing agency for the product of the Eagle company and also for handling the footwear of the Meyer Rubber Co., of New Brunswick, New Jersey. Shortly afterwards the American Rubber Co. became a manufacturing concern and built a large plant for making footwear and clothing in Cambridge, Mr. Hood still being associated with Mr. Evans in this venture.



GEORGE H. HOOD.

In 1878 Mr. Hood founded a rubber manufacturing company of his own in Chelsea, Massachusetts, calling it the Boston Rubber Co. He devoted his energies to the manufacture of wringer rolls, molded goods and rubber-surface cloths. Ten years later he bought a factory at Franklin, Massachusetts, and began the manufacture of rubber footwear, giving his product the name of the "Bell" brand. He was a man of initiative and of many original ideas, and embarked on quite a campaign of rubber footwear advertising in publications of national circulation. This proved to be a profitable course and he soon built up a considerable footwear business. In 1892 he sold his entire interests to the United States Rubber Co., becoming one of the directors of that corporation, but four years later he retired from this connection and was not after that actively engaged in rubber enterprises. But his strong personality had stamped itself so deeply upon the rubber trade that notwithstanding his retirement so many years ago from active work, he is still remembered by all except the very youngest members of the trade as a forceful factor in this industry.

Not all of his energy, however, was absorbed by his interest in rubber manufacture. He was one of the organizers of the Rubber Mutual Insurance Co., a director in the old National Hamilton Bank of Chelsea, and also in traction, light and power companies. After retiring from the United States Rubber Co. he devoted much of his time to travel in foreign countries, and being a very keen and intelligent observer he acquired a vast fund of general information, which made his conversation most instructive and interesting.

His wife died last March, at Palm Beach, Florida, but he is survived by three sons—Frederick C., Arthur N. and Richard P. Hood—all connected with the Hood Rubber Co, and by two daughters—Mrs. R. L. Whitman and Miss Helen Hood.

ALBERT T. MORSE.

With the passing of Albert T. Morse, who died in New York, December 10, the crude rubber trade will miss one who for many years held a leading place. Coming from Worcester, Massachusetts, in 1877, he, with his brother, Charles A. Morse, joined the staff of Earl Brothers in New York. He developed rapidly as a salesman, and in 1894 began independent operations under his own name.

His sterling worth, his probity and his exactness in his business relations won for him many friends, and his marked success—and that of A. T. Morse & Co., when Charles A. entered the firm—was the logical outcome of his ability and popularity, and a source of pardonable pride to both of the brothers.

Mr. Morse saw the rise and success of many rubber manufacturing companies and the fall of some, and his advice, often sought, was always in the interest of conservative measures and methods.

He had many intimates among the leaders of the older generation of rubber men, including E. C. Converse, R. D. Evans, Amaza Spadone, George A. Alden, and men of that type; and many of the most active crude rubber men of the present generation received from him valuable instruction in the science of purchasing crude rubber. He withdrew from active work in 1911 but still retained an interest in the firm of Meyer & Brown.

BENJAMIN F. VITT

Benjamin Franklin Vitt, for many years connected with various rubber importing and manufacturing concerns, died at his home in Woodhaven, Long Island, on December 12. Mr. Vitt began his career with the importing house of Jules S. Abecasis, which was an important factor in the rubber trade for many years. He was with the New York Commercial Co. for about 15 years and with the Diamond Rubber Co. for about 5 years. After the amalgamation of the Diamond and Goodrich companies he became connected with the rubber importing house of Ed Maurer, retiring from active work about two years ago on account of failing health.

New York's motor fire apparatus is valued at $1,000,000 and includes 122 pieces.

News of the American Rubber Trade.

THE INDIA RUBBER WORLD'S NEW OFFICES.

WITH the opening of the New Year, THE INDIA RUBBER WORLD is established in its new office at 25 West Forty-fifth street. The reason of this change was the necessity for more room, a necessity occasioned not only by the growth of THE INDIA RUBBER WORLD, but by the increasing number of books issued by The India Rubber Publishing Co.

THE RUBBER CLUB'S FIFTEENTH ANNUAL DINNER.

The Rubber Club of America will hold its fifteenth annual dinner at the Waldorf-Astoria in New York on Tuesday, January 6 next, at seven o'clock. There will be a number of interesting speeches, two well-known speakers who are to be present on that occasion being former Congressman Martin W. Littleton, of New York, and Justice Almot F. Jenks, of the New York State Supreme Court; and in addition to the speaking there will be a number of special original features.

The members with their guests will be seated at round tables accommodating eight or ten people, so that those who wish to sit together in parties can do so by communicating with the secretary, Mr. H. S. Vorhis, 314 Fourth avenue, New York. The dinner committee consists of: Charles A. Coe, chairman; William E. Barker, Robert L. Rice, Robert B. Baird, and Theodore W. Bassett.

PORTAGE RUBBER CO. MEETINGS.

At a special meeting of the board of directors of The Portage Rubber Co., held December 19, a resolution was passed authorizing the payment of a regular quarterly dividend of 1¾ per cent. on preferred stock of record on December 1. It was also decided to erect an addition to the plant at Barberton, at a cost of about $25,000. The annual meeting of stockholders is to be held on January 19, and at that time the stockholders will be asked to vote on a proposition for a $250,000 increase of capital stock. Officers of the company report excellent prospects for the year 1914.

THE MULCONROY COMPANY OPENS AN OFFICE IN NEW YORK.

On January 1, the Mulconroy Co., of Philadelphia, manufacturers of belting, packing, hose and general mechanical rubber goods, opened a store in New York at 150-152 Chambers street. This new store will be in charge of Mr. R. L. Reed, who has had over ten years' experience in handling general mechanical rubber goods, and is therefore very familiar with this line of goods, as well as with the mechanical trade.

SOMETHING NEW IN ADVERTISING.

The December number of THE INDIA RUBBER WORLD contained a paragraph about the completion of the new factory of the Dominion Tire Co., Limited, of Berlin, Ontario, and in an earlier number of this publication there appeared an illustrated description of this very fine plant in which "Dominion" tires, plain or nobby, are now being made. A recent issue of the "Montreal Herald," had a four column article regarding this company and its new factory, not only illustrating the factory and the tire, but giving pictures of the directors of the company, including three Americans: Col. S. P. Colt, Mr. H. E. Sawyer and Mr. E. S. Williams.

But from an advertising standpoint, perhaps the most interesting exploit of this company—with which Mr. Ralph W. Ashcroft, the advertising manager, is to be credited—was the extending early in December of the following invitation to some 50,000 users of tires to send in their name and address and the date of their birth. Here is their invitation:

"The directors of the Dominion Tire Company, Limited, Canadian Consolidated Rubber Company, Limited, selling agents, wish to celebrate the birth of their new million dollar factory, at Berlin, Ontario, by presenting you, express prepaid, with a 'Dominion' tire, plain or nobby tread, for your car, should your birthday anniversary occur on the same date as that of a plurality of those motor car owners who return enclosed card. R. S. V. P."

It is easy to see under the general law of averages that everyone who accepted this invitation and sent in a card, stood just one chance in 365 of getting a free tire—a chance well worth taking, considering the only expense involved was a 2-cent stamp. Incidentally, these cards give the company's advertising department accurate information as to the date on which the birthday of 50,000 car users falls and it may safely be assumed that they will utilize this information to send friendly greetings on these anniversary days. This is certainly very new in advertising and very clever.

DETROIT FACTORY BRANCH FOR MECHANICAL RUBBER CO.

The Mechanical Rubber Co., of Cleveland, Ohio, has opened a factory branch at 228 Jefferson avenue, East, Detroit, Michigan. The new plant contains between 15,000 and 20,000 square feet of floor space, and by January 1 a complete stock of mechanical rubber goods will be installed. The present selling force in that territory will be maintained and added to. The Ohio Rubber Co., which has been identified with the Cleveland factory in the sale of its product through Ohio, Kentucky and Tennessee, will occupy a part of the building, carrying a complete line of waterproof clothing and automobile tires and accessories. The business is in charge of E. H. Griffith, who for the past four years has been general sales manager of the R. & J. Dick Co., of Passaic—manufacturers of balata belting—and who has had long experience in mechanical lines.

THE GOODRICH THE OFFICIAL SQUASH RACQUET BALL.

The Goodrich Squash Racquet Ball has again been selected by the United States Squash Racquet Association for official use by its members. This is a jet black ball, with rubber surface, 1¾ inches in diameter, weighing approximately 1 ounce, and is put up in sealed and dated boxes.

FIRE HOSE CONTRACTS AWARDED.

Among the contracts awarded by various cities during the past month for needed supplies of fire hose, are the following: American Rubber Co., 2,000 feet "Cracker-Jack" hose—Oakland, California; Boston Woven Hose & Rubber Co., 8,000 feet "Bay State" brand hose—Los Angeles, California; Bowers Rubber Co., 2,000 feet "Victor" jacket—Los Angeles, California, and 1,250 feet "Victor" brand—Oakland, California; Chicago Fire Hose Co., 1,000 feet—St. Joseph, Missouri; Eureka Fire Hose Co., 2,000 feet "Paragon"—Chattanooga, Tennessee; Fabric Fire Hose Co., 2,000 feet "Keystone"—Chattanooga, Tennessee; 500 feet—Troy, New York; 500 feet—Pekin, Illinois; 600 feet—Lewiston, Pennsylvania; B. F. Goodrich Co., 500 feet—St. Cloud, Minnesota; 1,350 feet—St. Joseph, Missouri; 500 feet—Troy, New York; Manhattan Rubber Co., 5,300 feet—New Haven, Connecticut; New Jersey Car Spring & Rubber Co., 500 feet—Chippewa Falls, Wisconsin; New York Belting & Packing Co., 1,000 feet—Racine, Wisconsin; Republic Rubber Co., 2,000 feet "Invader"—Los Angeles, California; and 500 feet each of "Overall," "C. C. C.," "Hudson" and "Admiral," by the city of Troy, New York, to local dealers.

STATEMENT OF THE BOSTON BELTING CO.

A condensed summary of the balance sheet of the Boston Belting Co., as of September 30 last, is as follows:

LIABILITIES.		
Capital Stock		$1,000,000.00
Reserve Fund		800,000.00
Profit and Loss		129,166.17
Notes Payable		351,000.00
Unsettled Bills		1,974.55
ASSETS.		
Real Estate (Land and Buildings)	$329.711.85	
Machinery	271,286.81	
Tools, Furniture and Fixtures	102,122.91	
Water Privilege	150,000.00	
Cash	102,149.47	
Bonds Receivable; Notes Receivable; Investment Acc't; Accounts "	745,984.75	
Merchandise	580,734.93	
Trade Marks	100.00	
Sundries	50.00	
	$2,282,140.72	$2,282,140.72

The statement shows:

Quick Assets	$1,428,869.15
Debts	352,974.55
Excess of Quick Assets	$1,075,894.60

SUBSCRIPTIONS TO THE NEW UNITED STATES RUBBER PREFERRED STOCK.

On November 6 a circular was sent out by the United States Rubber Co. to its stockholders announcing a new issue of first preferred 8 per cent. stock to the amount of $9,422,000, each stockholder being offered the privilege of subscribing for one share of the new stock for every ten of either preferred or common then held.

The time limit of this subscription offer expired on December 15, and on the following day the company issued the statement given below:

"The amount of subscriptions received from our stockholders under the company's offering of its first preferred stock, with a few from abroad to be added, is $1,715,700. Considering that general financial conditions have not been propitious to the placing of securities of any kind, the subscriptions are as much as has recently been anticipated.

"In making the offering, the directors intended, as was stated in their circular, after first giving our own stockholders and none others the privilege of subscribing at par, to place the unsubscribed portion in position to be disposed of to the public above par when times improve; the strong financial condition of the company making it inexpedient to offer the unsubscribed stock outside until general financial conditions are more favorable than at present. The untaken stock will not be disposed of to the public except at a figure substantially above par. Meanwhile, as a result of the above, the company has nearly $2,000,000 additional permanent working capital."

RUBBER COMPANY DIVIDENDS.

On December 3 the directors of the Rubber Goods Manufacturing Co. declared the fifty-ninth regular quarterly dividend of 1¾ per cent. on the preferred stock and a dividend of 1 per cent. on the common stock—both payable December 15, 1913, to stockholders of record at the close of business on December 10.

The Batavia Rubber Co. has declared a regular quarterly dividend of 1½ per cent. on its preferred stock and of 1 per cent. on its common stock, with an extra dividend of ½ per cent. on the common—payable January 1 on stock of record on December 15.

TRADE NEWS NOTES.

The Southern Tire & Rubber Co., incorporated in December, 1912, under the laws of Florida, has arranged for the erection of a factory at Augusta, Georgia, for the manufacture of automobile tires. The new building is to be 52 x 100 feet, on a site in the vicinity of the Armour Fertilizer Works, two acres of land on the Central Railroad having been purchased by the company for this purpose. The present expectation is to commence production by early spring.

A factory is being erected at Ecorse, Michigan, by the Williamson Pneumatic Tire Co.

Long Island City is soon to have a new tire manufacturing industry, a site for a factory for the production of automobile tires having recently been purchased in that city by the Akron Tire Co. The property covered by this purchase is located on the south side of Skillman avenue, between Honeywell avenue and Moore street, and comprises approximately 17,500 square feet.

Work has been practically completed on the brick addition to the plant of the Fairfield Rubber Co., at Fairfield, Connecticut.

The Hewitt Rubber Co. of Buffalo, New York, is erecting a power house at its plant located at Kensington avenue and the New York Central Railroad, and a large amount of equipment will be installed, the estimated cost of the improvements being $61,000.

The Askam Rubber Co. has completed installation of the rubber reclaiming machinery required in its factory on North street, Milford, Connecticut.

The creditors of the Ennis Rubber Manufacturing Co., of New York, are to receive 3¼ per cent. in settlement of their claims, a "first and final" dividend of this amount having recently been ordered paid.

The Hardright Brush Co., of Belleville, New Jersey—manufacturing brushes with rubber bristle setting and other patented and distinctive features—has adopted the trade-mark brand "Hardright" for its specialty, the use of the brand "Rubber-Vulc" and of the corporate name "The Rubber Bound Brush Co." having been refused by New Jersey State courts.

The capital stock of the Vulcan Rubber Co., of Erie, Pennsylvania, has been increased from $100,000 to $200,000.

The Dreadnaught Tire & Rubber Co. is to open its new tire manufacturing plant at Orangeville, Maryland, on January 1, with a force of 200 workmen. This company was incorporated in February, 1913, with a capital stock of $1,000,000.

The Goodyear Tire & Rubber Co. of Akron has taken over the Standard Tire Protector Co. of that city and will hereafter distribute Standard Tire Protectors to the trade through its various branches.

According to the statement of the Swinehart Tire & Rubber Co., of Akron, filed in Boston, the assets of the company on August 31 amounted to $1,325,616, including cash and accounts receivable, $435,503; manufactured products and merchandise, $561,519; real estate valued at $90,242, and machinery valued at $165,955. The liabilities of the company are shown to include capital stock outstanding, $800,000; accounts payable, $441,717, and a profit and loss account of $73,392.

The Columb Tyres Import Co., incorporated in New York in September, and located at 1891 Broadway, succeeds the concern known as the Russian Tyre Sales Co., whose headquarters are at Riga, Russia.

The new service station of the B. F. Goodrich Co., at 1780 Broadway, New York, will be devoted exclusively to motor truck tires. The quarters occupied by the company at this address comprise about 20,000 feet of floor space, used for garage, shop and stock carrying purposes, the shop being located on the ground floor.

HANOVER RUBBER CO. SOON TO COMMENCE OPERATION.

The Hanover Rubber Co., incorporated under the laws of Massachusetts on December 1 with an authorized capital of $25,000, is erecting a new factory at West Hanover, Massachusetts, and expects about the middle of January to commence production of a complete line of rubber heels and soles. The paid in capital of the company amounts to $15,000, the remaining $10,000 issue being held as treasury stock for the future needs of the business. The officers are: George J. J. Clark, president; Calvin J. Ellis, treasurer; A. O. Sellman, secretary—these three officers with Walter E. Parent, superintendent of the factory, being the incorporators.

CHANGE OF ADDRESS OF MAHLOW & WYCKOFF.

Mahlow & Wyckoff, makers of molds for the drug, sundry and mechanical rubber goods trade, have removed from their former location at 352 South Warren street, to larger quarters at Brunswick avenue and East Trenton railroad, Trenton, New Jersey, where, with considerably increased equipment and capacity they are in a position to make deliveries with greater promptness than heretofore.

EXTENSIONS AT THE KNIGHT PLANT.

The Knight Tire & Rubber Co. of Canton, Ohio, is enlarging its plant by the addition of two buildings 75 x 125 feet, three stories high, and one building 55 x 125 feet, two stories high; this extra space being sufficient to enable the company to double both its force of operatives and its production. It is estimated that the improvements under way will cost in the neighborhood of $110,000, and that the daily capacity of the enlarged plant will be 500 tires and 700 tubes. This company has recently completed the installation of a new laboratory.

HERE IS THE FIRESTONE FAMILY.

The group shown below does not include all the salesmen of the Firestone force, but it does include some 219 of them. They were photographed recently when gathered together at a conference at the factory in Akron. They are an ambitious, active and aggressive lot of men and Mr. Firestone, who sits in the center, looks proud of them, and with just cause. They are all numbered and named below so that everybody can tell who's who.

A GROUP OF FIRESTONE SALESMEN.

1. J. W. Thomas
2. M. E. Ake
3. Wm. Clark Waters
4. Wm. A. Shuler
5. C. H. Gerhold
6. H. W. Kugler
7. F. E. Herr
8. O. E. Starr
9. C. O. Brandes
10. W. L. Burgess
11. W. L. Esterly
12. D. C. Sander
13. W. R. Walton
14. E. S. Firestone
15. H. A. Coffin
16. E. S. Babcox
17. E. A. Hoffman
18. W. G. Bedford
19. H. W. McFadden
20. P. B. Talbott
21. F. T. Bailey
22. Geo. M. Martin
23. E. L. Campion
24. A. W. Moore
25. J. E. McGinnis
26. J. F. Cast
27. W. H. Bell
28. T. J. Glenn
29. Wylie West
30. A. L. Manley
31. G. A. Richards
32. R. L. Harpham
33. E. W. Be Saw
34. M. L. Terbush
35. J. P. Patterson
36. L. W. Klein
37. R. E. Glass
38. J. F. Lee
39. W. S. Campbell
40. Wm. L. Warnock
41. H. V. Eckerman
42. Richard Kaough
43. G. J. Bates
44. Geo. T. Hite
45. L. G. Fairbank
46. C. J. Root
47. A. G. Partridge
48. J. G. Robertson
49. S. G. Carkhuff
50. H. S. Firestone
51. R. J. Firestone
52. F. C. Blanchard
53. L. Sisler
54. R. G. Harris
55. C. H. Sorrick
56. J. A. Plank
57. G. W. Howard
58. C. P. Sanders
59. R. H. Turner
60. H. Rex McKnight
61. H. J. Adams
62. A. C. Galbraith
63. J. S. Ridley
64. H. L. McGregory
65. A. L. Gale
66. C. C. Carlton
67. B. W. Barton
68. P. W. Fowler
69. F. E. Gahagan
70. R. L. De Voe
71. J. T. Stuart
72. C. L. Miller
73. D. F. White
74. G. A. Spohr
75. C. A. Clark
76. S. W. Harris
77. B. R. Leisure
78. J. D. Trelfall
79. J. F. Barnett
80. R. F. Zeisloft
81. A. D. Beach
82. C. I. Albach
83. J. E. Mayl
84. W. G. Rankin
85. G. W. Helman
86. E. R. Wood
87. C. P. Houghton
88. L. C. Osborne
89. P. E. Akers
90. N. C. Stevens
91. C. A. Myers
92. C. H. Burger
93. M. P. Krag
94. E. S. Kelly
95. J. E. Weldon
96. J. P. McGraw
97. G. C. Faling
98. Fred Way
99. L. L. McClintock
100. W. G. McCruden
101. D. B. Moore
102. C. H. Harris
103. F. C. Rudisell
104. W. J. Andrews
105. A. G. Roberts
106. E. S. Curtis
107. T. A. Scott
108. R. E. Kingsley
109. J. J. Foster
110. M. K. Engel
111. R. W. Osborn
112. G. A. Talbott
113. E. M. Hahn
114. F. C. McCracken
115. G. L. Townsend
116. Chas. M. Chapman
117. C. E. Morrison
118. W. G. Noble
119. E. F. Mayne
120. F. W. Thatcher
121. G. W. Curtiss
122. J. T. Hickman
123. M. A. Potter
124. R. W. Phelps
125. F. W. Sherwood
126. R. G. Bird
127. H. W. Darrow
128. F. M. Moore
129. A. T. Smith
130. E. B. Bowling
131. Burt Stevens
132. E. J. Sears
133. N. P. James
134. F. J. Flanigan
135. M. M. McCallum
136. W. T. Brown
137. D. B. Price
138. D. C. Hathaway
139. C. M. White
140. P. W. Gavin
141. W. R. Cain
142. A. T. Tarbell
143. C. E. Jackson
144. H. U. Reading
145. F. W. Solarek
146. M. E. Palmer
147. L. H. McEllherren
148. F. P. Kendall
149. J. W. Fleming
150. W. J. Shea
151. A. Baumgartner
152. R. G. Wicks
153. M. L. Armstrong
154. H. L. Smith
155. Ed. Weber
156. K. P. Herbruck
157. Wm. Taite
158. H. Pressman
159. Geo. Meeley
160. L. R. Jackson
161. Earl Jost
162. J. L. Craig
163. L. W. Berger
164. M. M. Whorley
165. R. V. Cline
166. R. E. Wolcott
167. T. Campbell
168. W. A. Clark
169. G. H. Smith
170. M. A. Kennedy
171. E. R. Lowenhaupt
172. F. Mallison
173. H. J. Ackerman
174. C. R. Booth
175. W. E. Fouse
176. E. I. Baine
177. W. J. Lawrence
178. F. B. Geary
179. J. S. Wood
180. J. J. Shea
181. H. H. Partridge
182. A. W. Blackburn
183. A. J. Gendron
184. D. T. Davies
185. John Irwin
186. E. R. Wood
187. L. G. Greenwald
188. Roy E. Warner
189. C. W. Brown
190. L. J. Sparks
191. R. J. Faries
192. K. K. Jackson
193. H. W. Smith
194. R. M. McConnel
195. Jos. H. Walsh
196. F. M. Salley
197. A. J. Slavin
198. S. W. Dickinson
199. R. E. Kingsley
200. S. L. Clark
201. T. J. Hargadon
203. J. H. McDonough
204. G. I. Engle
205. Milton Van Keuren
206. S. E. Douglas
207. G. M. Stilson
208. D. L. Gregory
209. H. C. Brenizer
210. C. H. Maxwell
211. D. E. Wilcox
212. L. G. Smith
213. P. M. Pontius
214. M. A. Magee
215. H. H. Wesener
216. E. Farr
217. E. L. Bixby
218. R. C. Fay
219. H. A. Smith

A FAMOUS GOODYEAR PORTRAIT SOLD.

An interesting transaction in art took place a few days ago, when the United States Rubber Co. purchased one of the two celebrated life-size half-length portraits of Charles Goodyear, painted a few years before his death by the American artist George P. A. Healy, a very distinguished portrait painter of sixty years ago. There were two of these oil paintings by Mr. Healy, both painted on hard rubber block made by Goodyear for that purpose. One of these portraits, the property of Mr. Nelson Goodyear, grandson of Charles Goodyear, attracted a great deal of attention in THE INDIA RUBBER WORLD exhibit at the Third International Rubber Exposition held at the Grand Central Palace in New York in September, 1912. This second portrait, which has also been the property of the Goodyear descendants, had been for some time prior to its transfer to the United States Rubber Co. on exhibition in the Brooklyn Academy of Arts and Sciences.

THE ASBESTOS & RUBBER WORKS OF AMERICA.

The December number of this publication contained a paragraph regarding the sale of the property of The Asbestos & Rubber Works of America to a new corporation, The Asbestos & Rubber Works of New Jersey, but a communication has been received from Mr. E. H. Garcin, president of the former company saying that the sale simply included the factory, machinery, stock, merchandise and other property located in the State of New Jersey. The statement continues: "All the property of this company, the trade-marks, the good will and all property of whatever kind or nature, outside of the State of New Jersey, remains the property of this company, and in addition they own 20 per cent. of the capital stock of the New Jersey company."

RUBBER AT THE SAFETY AND SANITATION SHOW.

Under the auspices of the American Museum of Safety, the first International Exposition of Safety and Sanitation was held in the Grand Central Palace, New York, from December 11 to 20. It attracted a good deal of attention, as both these subjects—safety and sanitation—are now very much in the public mind. Among the exhibitors there were two who had devices depending for their successful operation on rubber. One was the Draeger Oxygen Apparatus Co. of Pittsburgh, which had a fine exhibition of the Draeger helmet, intended for the use of miners so that they can enter for rescue work in a mine immediately after an accident from accumulated gases. This helmet is attached to a large rubber bag, worn across the breast of the miner, which is supplied with the proper amount of oxygen from a tank worn across the back. This breathing bag is connected by rubber tubes to the helmet fitted securely over the wearer's head, in which rubber plays an important part.

They also displayed their Pulmotor for the automatic resuscitation of those rescued from drowning and in other cases where a supply of oxygen is needed.

J. A. R. Elliott, of Seventy-fifth street, Brooklyn, N. Y., exhibited the Elliott Perfect Ear Protector, which is placed in the ear to protect the drum from excessive noises, wind, dust, or the entering of water when swimming. This protector depends for its efficiency on two rubber discs.

STAUNTON PATENTS PONTIANAK PROCESS.

Gray Staunton, of Chicago, has patented a process of preparing a new pontianak compound, which is said to serve as a most valuable ingredient in compounding rubber mixtures, especially where used as an insulating material. The ingredients which are mixed with the pontianak prepare it for working in the mixing rolls and will give the same result as if the new material were a crude rubber of medium or low grade. The new product can be cured as usual in the ordinary vulcanizing oven, but it acts very quickly, since a sheet ¼ of an inch in thickness requires only about an hour's exposure at a steam pressure of 60 pounds.

TRADE NEWS NOTES.

L. Albert & Son, scrap rubber dealers of Trenton, New Jersey, who have been doing business under the name of the Regal Rubber Co., have decided to drop this name, owing to the fact of its use by a company in another city, and have adopted the trade name of The Olden Rubber Manufacturing Co.

A contract has been awarded by the Kerite Insulated Wire & Cable Co. for a 65 x 150 feet three story and basement brick addition to its factory at Seymour, Connecticut.

The United Rubber Manufacturing & Reclaiming Co., incorporated with a capital of $350,000, has chosen a location at Brantford, Ontario, for its plant, work on which is to be started early in the spring. A tract of three and a half acres has recently been selected by representatives of the company as the site of the new factory, which is expected to be 60 x 250 feet in area and to employ 100 men at the start.

The Independent Tire Co., whose factory at Toronto, Ontario, has been in operation only since early summer, turning out less than half its capacity of 500 tires a day, has issued a statement showing net earnings for the month of October equal to a 30 per cent. dividend on the total paid in capital.

The American Hand Sewed Shoe Co., of Omaha, Nebraska, has been reincorporated under the same name with capital stock of $150,000. A. T. Austin, president of the original company, is not connected with the new concern. The directors of the new company are Albert A. McClure, Geo. H. Mayo and Henry B. Hubbard, the latter two being connected with the United States Rubber Co. The incorporators are A. A. McClure, T. W. Austin and E. G. McGilton.

The Kelly-Springfield Tire Co., whose first northwestern branch was opened about a year and a half ago, at 515 East Pike street, Seattle, Washington, has added another branch at 87 Broadway, North, Portland, Oregon, in its chain of service stations. Mr. Charles W. Harris, in charge of the company's business for the northwest, British Columbia and the Orient, states that progress has been phenomenal. The new branch combines offices, store room and work shop of sufficient size to accommodate several trucks at a time for the application of the company's well known block tires.

A company has recently been organized at Bridgeport, Connecticut, under the name of the Sanford Rubber Co., to deal in automobile tires and other rubber goods. The capital stock of this new company is $25,000, and the incorporators are Wilbert Sanford, William Seward and Charles E. Williamson.

The New York branch of the Lee Tire & Rubber Co., of Conshohocken, Pennsylvania, has moved from Seventh avenue to larger quarters at Broadway and Sixty-seventh street, where a service station has also been established. The Chicago branch of this company—which distributes throughout the central west and is in charge of Charles H. Wright—has also taken larger quarters, having removed from 1241 Michigan avenue to the two-story building at 2031 Michigan avenue.

A service station is to be established by the Kelly-Springfield Tire Co. in the new building being erected at 551-555 West Fifty-seventh street, New York.

A branch is very soon to be established at Milwaukee, Wisconsin, by the Hubmark Rubber Co., of New York. This branch will be in charge of Victor M. Stamm, for eighteen years connected with the Goodyear Rubber Co., and will distribute to the trade in that vicinity "Hub Mark" and "Bay State" footwear, "G. & J." tires and a general line of the United States Rubber Co.'s waterproof clothing, mechanical rubber goods and druggists' sundries.

Braender tires are hereafter to be distributed in Boston and the surrounding section by the Dayton Tire Co., located at 589 Boylston street.

THE NEW YORK COMMERCIAL CO. VS. SWINEHART.

The suit brought against the Swinehart Tire & Rubber Co. of Akron, Ohio, by the trustees in bankruptcy of the New York Commercial Co. in the New York District Court, has been transferred, upon request of the defendant company, to the Federal Court. From the complaint on file it appears that shipment of **Upriver Fine** Para to the value of $22,362.67, on contracts held on February 15, when the New York Commercial Co. was petitioned into bankruptcy, were made by the receivers of that company to the Cuyahoga Rubber Co., the arrangement being that several promissory notes of the Cuyahoga company, endorsed by the Swinehart Tire & Rubber Co., were to be given in payment; and these notes or their equivalent not having been received, the trustees in bankruptcy have sued for the above mentioned amount, with interest and costs.

NEW INCORPORATIONS.

Airless Tire Filler Co., November 19, 1913; under the laws of Alabama; authorized capital, $2,000. Incorporators: W. E. Oldham, J. D. Smith and J. F. Kilton. Location of principal office, Birmingham, Alabama.

Allen-Keppel Rubber Co., October 1, 1913; under the laws of Virginia—initial incorporation January 21, 1913, under name of Flynn-Allen Tire Corporation—authorized capital, $10,000. Incorporators: James J. Flynn, George A. Allen—both of Richmond, Virginia—and C. R. Caldwell, Staunton, Virginia.

American Waterproof Sole Co., November 29, 1913; under the laws of Massachusetts; authorized capital, $90,000. Incorporators: Edmund J. Barry, Brockton, Joseph A. Safford, Cambridge, Gustav J. Nord, Dorchester—all of Massachusetts. To buy sell, and deal in boots, shoes, waterproof goods, etc.

Artillery Auto Tire Protector Co., November 5, 1913; under the laws of Delaware; authorized capital, $10,000. Incorporators: A. J. Coppock, Indianapolis, Indiana; John C. Wellington and H. C. May—both of Pittsburgh, Pennsylvania. To manufacture and sell protecting devices for tires.

Barnard-Michael Tire Co., Inc., December 22, 1913; under the laws of New York; authorized capital, $100,000. Incorporators: Robert S. Barnard, Isidore and Sidney M. Michael—all of Buffalo, New York. Location of principal office, Buffalo, New York. To manufacture auto tires, accessories, etc.

Central Prest-O-Ceal Co., November 17, 1913; under the laws of Indiana; authorized capital, $50,000. Incorporators: Harry L. Archie, Frank K. Gardner and Grace C. Grimes.

Eureka Resilient Wheel Co., November 6, 1913; under the laws of Kentucky; authorized capital, $10,000. Incorporators: Thomas Sharp and C. A. Simpson—both of Ludlow, Kentucky—and Charles E. Schroeder, Cincinnati, Ohio. To manufacture a resilient wheel whereby the use of pneumatic tires may be done away with and solid tires substituted.

Hanover Rubber Co., December 1, 1913; under the laws of Massachusetts; authorized capital, $25,000. Incorporators: George J. J. Clark, Calvin J. Ellis and Albert O. Sellman—all of West Hanover, Massachusetts. To buy, sell and manufacture rubber, rubber scrap, etc.

Henderson Tire Co., Inc., December 3, 1913; under the laws of New York; authorized capital, $400,000. Incorporators: Chester O. Henderson, 133 Kensington avenue; Ralph R. Hillman, Ellicott Square, and Alfred L. Lyth, 43 West Eagle street—all of Buffalo, New York. Location of principal office, Buffalo, New York. To manufacture tires, tubes, etc.

Kapit & Greenberg, Inc., December 3, 1913; under the laws of New York; authorized capital, $3,000. Incorporators: Nathan Kapit, Bernard A. Greenberg and Samuel B. Tomberg—all of 47 East Broadway, New York. Location of principal office, New York. To manufacture and deal in waterproof clothing, etc.

Lackawanna Rubber Co., December 5, 1913; under the laws of New Jersey; authorized capital, $10,000. Incorporators: Walter F. Smith, Alice F. Smith and J. Clifford Stricker—all of Trenton, New Jersey. To manufacture, purchase and sell all kinds of goods of which rubber is a component part.

Lansing Rubber Works, December 5, 1913; under the laws of Michigan; authorized capital, $50,000. Incorporators: Arthur C. Haite, Frank Preuss—both of Lansing, Michigan—and Harry Shepherd, Birmingham, Michigan. Location of principal office, Lansing, Michigan. To manufacture mechanical lines of rubber goods, and mattresses.

The Raincoat Co., Inc., December 1, 1913; under the laws of New York; authorized capital, $20,000. Incorporators: Jacob Manne, 231 Park Place, Brooklyn, New York; William Eastman, Roslyn, New York, and May R. Mevelle, 422 First avenue, Elizabeth, New Jersey. Location of principal office, New York. To manufacture and deal in rubber coats, etc.

The Sanford Rubber Co., November 5, 1913; under the laws of Connecticut; authorized capital, $25,000. Incorporators: Wilbert Sanford, Bridgeport, Connecticut; William Seward, New Rochelle, New York, and Charles E. Williamson, Bridgeport, Connecticut.

Volco Rubber Co., Inc., November 26, 1913; under the laws of New York; authorized capital, $5,000. Incorporators: Charles Claghorn, L. W. Newbery and William Durbrow—all of 206 Broadway, New York.

Wisconsin State Rubber Co., November 6, 1913; under the laws of Wisconsin; authorized capital, $10,000. Incorporators: H. D., D. E. and S. B. Detienne, and J. L. Wallis. To buy, sell and deal in rubber goods, and to do a general jobbing business of everything in rubber.

The Worcester Tire Fabric Co., December 10, 1913; under the laws of Massachusetts; authorized capital, $50,000. Incorporators: Arthur D. Sykes, Rockville, Connecticut; Peter Reilly, Union street, and Edwin G. Norman, 311 Main street—both of Worcester, Massachusetts. To buy, sell, manufacture, and deal in rubber and all fibrous materials, and machinery, tools and appliances used in connection therewith.

Wynn Pneumatic Puncture-Proof Tire Co., December 1, 1913; under the laws of Michigan; authorized capital, $25,000. Incorporators: Robert J. Wynn, Henry Hickler and Marshall N. Hunt—all of Sault Ste. Marie, Michigan. Location of principal office, Sault Ste. Marie, Michigan. To manufacture and sell pneumatic tires, wheels and other rubber goods.

San-Air Co., November 25, 1913; under the laws of Kentucky; authorized capital, $500. Incorporators: J. T. Lockridge, W. F. Smity and J. W. Christy. To manufacture a preparation to prevent pneumatic tires from puncturing.

COTTON GINNING FOR ELEVEN MONTHS OF 1913.

According to the early December report of the Census Bureau, 12,081,100 bales of cotton had been ginned in the United States up to December 1 of 1913, 61,516 of this number being Sea Island. Included in this total are 86,760 round bales, counted as half bales. This quantity is supposed to represent approximately 83 per cent. of the entire 1913 crop, this calculation being based on the average ginnings of the same period for the last seven years. The total number of bales ginned during the corresponding eleven months of 1912 was 11,954,541, and for the same period in 1911, 12,816,807. Texas figures most prominently in this showing, with 3,571,331 bales, Georgia, Alabama and South Carolina following next in importance.

JOHNS-MANVILLE BRANCH CHANGES.

The Baltimore, Maryland, branch of the H. W. Johns-Manville Co. has been compelled by increase of business to secure additional space for its operations, and its removal is announced, to a location at 207-213 East Saratoga street, a modern six-story building in the center of the business district. The company has now not only attractive offices, stores and warehouse accommodations, but a railroad switch running into the building affording convenient means for the receipt and shipment of merchandise. The Cleveland, Ohio, branch of the company has also been obliged to provide larger quarters for several of its subsidiary offices as well as additional warehouse space, another building, now being remodeled, having recently been leased for storage purposes. Other company branches in Ohio have also removed to new quarters, present locations in the various cities being: Akron, 717 Second National Bank building; Columbus, office and contract department, 45 West Long street—warehouse half a block distant; Dayton, 259 Fourth street arcade; Toledo, 213 Water street; Youngstown, 502 Stambaugh building. The branch at Toronto, Ontario, has removed to larger quarters in the center of the wholesale district, its present location being 19 Front street, east, the store and warehouse having a combined floor space of about 35,000 square feet.

The Johns-Manville concern has recently closed a deal whereby it is to market, during a period of ten years, the complete output of the Jones Speedometer Co. of New York City.

TRADE NEWS NOTES.

Headquarters have been opened at 1019 Main street, Buffalo, New York, for the sale of Knight tires in that city and vicinity, with J. C. Carter in charge.

The capital stock of the Century Rubber Works of Chicago has been increased from $50,000 to $100,000.

The Boston Batavia Rubber Co. has taken offices in the new building of the Overland company in Boston, on Massachusetts avenue.

The Empire Rubber & Tire Co., of Chicago, has changed its location on Michigan avenue from No. 1305 to No. 1627.

The Cleveland, Ohio, office of the Portage Rubber Co.—of which C. E. Ball is manager—has been removed to 1816 Euclid avenue, in the center of the motor car district. Besides affording ample and much finer office space, a portion of the new quarters is used for the storage of tires, a complete line of which is carried in stock.

The consolidation of the Diamond and Goodrich rubber companies has been followed by the consolidation of the branches of the two companies in various cities, among others those of Portland, Oregon, and Indianapolis, Indiana. At the latter point, H. A. Little, former manager of the Goodrich branch, is to be in charge of the combined agency.

The Allen Auto Specialty Co. has removed its Chicago salesroom from 1436 to 1627 Michigan avenue. This company manufactures tire cases and gauges and is shortly to extend its operations by the opening of a San Francisco branch to take care of the trade on the Pacific coast.

The Vancouver Vulcanizing Co. has secured the agency for Diamond Rubber Co. products in Vancouver, British Columbia, and the surrounding territory.

An agency has been established at Seattle to handle the sale of Savage tires in King and Pierce counties, Washington, the firm with which this agency has been placed being composed of H. D. C. Chetlin, C. R. Maybury and E. F. Tawney.

The tire duck factory of the Goodyear Tire & Rubber Co., at Williamsville, Connecticut, now in process of enlargement, will be operated overtime when completed. The manufacture of automobile tire duck is quite an important industry in eastern Connecticut, this Goodyear plant and the three other mills engaged in similar production in Putnam and Danielson, all having sufficient orders on hand to make overtime operation necessary for some weeks.

MR. PEARSON SAILS SOUTH.

Mr. Henry C. Pearson sailed on the "Commewijne," of the Royal Dutch West India Mail, for the Spanish Main, on December 19. It is his plan to resume his winter travel stories in rubber lands very soon.

MR. WADLEIGH SAILS FOR SINGAPORE.

Mr. W. L. Wadleigh has spent approximately one-half of the fifty years that have elapsed since he had the privilege of being born in Boston, as a commission merchant, placing with American consumers various products from foreign markets. In this work he has come into active association with the rubber importing business, and became extremely interested in this line many years

W. L. WADLEIGH.

ago, so much so that about ten years ago he went to Mexico and spent a great deal of time there for five years, working out the *Castilloa* problem. On returning to Boston to devote his time as formerly to his commission business, he sold a great deal of Mexican rubber, taking the product of some eighteen different plantation companies and private estates, which he distributed directly to the consumer. But he states that he realized several years ago that the great rubber mart of the future would be Singapore, and so he determined to make connections with the Middle East. With this in view he will sail on the steamship "Princess Irene" on January 8 for Naples, and connect with a steamer which he expects will land him in Singapore on February 14. He intends to remain there during the winter in order to effect the proper association with Eastern planters, and then in the early summer will return to this country and locate his office in New York City, where he will act as a commission merchant for the planters and sell direct to American consumers.

PERSONAL MENTION.

H. G. Moesta, for the past year in charge of the Louisville, Kentucky, branch of the United States Tire Co., has been transferred to the company's New York office, being succeeded in the management of the Louisville branch by F. S. Cropley, former district manager with headquarters at Minneapolis.

John D. Ertel, employed for some time past as traveling auditor for the Firestone Tire & Rubber Co., of Akron, is now associated with the Philadelphia branch, as assistant to W. R. Walton, the general manager.

W. E. Cameron has been appointed sales manager of the Motz Tire & Rubber Co. of Akron, a position for which he is well qualified by reason of his previous connection with the company as western sales manager.

THE VIEWS OF MR. WILLIAM A. DE LONG.

In an interview with a representative of THE INDIA RUBBER WORLD, Mr. William A. De Long, who spent almost his entire life in the rubber business until his retirement several years ago, summed up in a few words the principal reasons for the present market conditions. His statement is in substance as follows:

"A discussion of the question as to whether Singapore is to be the world's future rubber market can only be theoretical. The locations of the rubber markets of the future will necessarily depend upon future conditions, the same as present conditions control the present shipments of rubber. If we turn to THE INDIA RUBBER WORLD of almost any month, it will be seen that the shipments of rubber from London to New York greatly exceed those from all other ports combined, including Hamburg, Antwerp, Colombo, Havre, Amsterdam and Singapore.

"Singapore is a primary market and if rubber were free to be shipped direct from that port to New York, it is plain to be seen that there would be many advantages in so doing. But the greater part of the eastern plantation rubbers are financed in England and Europe and the owners of the plantations are therefore often limited as to the disposal of their rubber, by reason of contracts made during the financing of the plantations. It is for this reason that most of the rubber coming from Singapore and other primary ports is shipped to European markets, where it is under the direction of the financiers who control it. This is, beyond doubt, not an advantageous method of getting the rubber to the dealer and the consumer, but those are the conditions at present.

"As to the future, it is probably not far amiss to predict that it will not be long before plantation owners or European financiers who control eastern plantation rubber will awaken to the fact that it is more advantageous to dispose of their product direct from Singapore or other primary markets. Syndicates will probably be formed and agents established in Singapore so that the rubber may be shipped direct from plantation to dealer and thence to the manufacturer."

PERSONAL MENTION.

At the last meeting of directors of the Boston Woven Hose Co., at Boston, Massachusetts, Geo. E. Hall, general manager, was elected to the vice-presidency of the company, his present official title being vice-president and general manager.

J. Haney, for the past three years associated with the Pittsburgh branch of the United States Tire Co., has been transferred to the company's Boston branch, of which E. H. Kidder is general manager.

The directors of the Republic Rubber Co. of Texas, at a recent meeting elected L. A. Watts, who has been for a number of years connected with the branch at Chicago, president and treasurer. The secretary of the Texas company, F. M. Randall, is thoroughly familiar with the trade in that field, having long been identified with the distribution of Republic tires in Texas and the surrounding country.

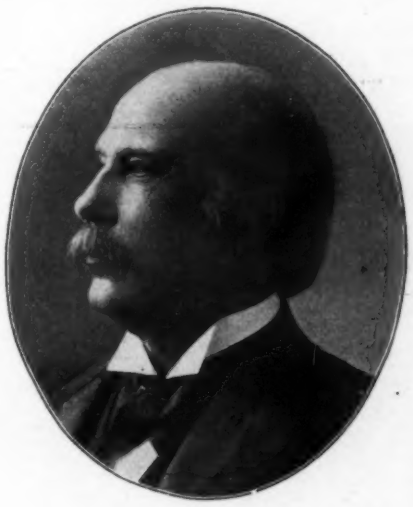
On January 1, Harry E. Field, a member of the sales force of the Thos. B. Jeffery Co., of Kenosha, Wisconsin, is to sever his connection with that company, in order that he may devote his entire time to the business of the Kelly-Field Co.—thus carrying out the arrangement entered into when this company was formed, in August, 1912, to handle the distribution of the tire and accessory output of the Lee Tire & Rubber Co.

J. C. McDiarmid has been promoted to the management of the Goodyear Tire & Rubber Co. branch at Portland, Oregon, from a position with the same company at Seattle, Washington.

E. S. Rickel, who for a number of years represented the Diamond Rubber Co., has succeeded J. W. Cully as manager of the Swinehart Clincher Tire & Rubber Co. of Detroit, Michigan.

MR. FRANKLIN W. PITCHER CELEBRATES HIS 80th BIRTHDAY.

Mr. Franklin W. Pitcher, president of the Easthampton Rubber Thread Co., long since located that fountain that Ponce de Leon missed, for while he celebrated the eightieth anniversary of his birth on last Christmas Day he is in reality about forty years old.



FRANKLIN W. PITCHER.

But his secret, as a matter of fact, is no secret at all. It is his perennial, persistent, overflowing optimism—which is logical, for who being born on Christmas Day would not be an optimist? It may be that there is an additional explanation of his youthfulness in the fact that Mr. Pitcher has always been too busy to grow old.

Nothing could be more interesting than conversation with Mr. Pitcher on the great industrial development of the eighty years spanned by his life. He makes the statement—which at first seems almost incredible but as a matter of fact is strictly true—that in 1833, when he was born—down in Dover, Maine—the only corporations in the United States were those interested in turnpikes and toll bridges. Reaping was done with a hand sickle; and he still bears the scar of a sickle on the little finger of his left hand, as a reminder of that fact. And all threshing was done with a flail. It has been a wonderful procession of progress during these eighty years, and Mr. Pitcher has been continuously in it.

He became associated with the rubber industry in 1882, when he closed out his lumber interests in Wisconsin and invested in the business of the Boston Elastic Fabrics Co. When later this company was liquidated and the Revere Rubber Co. was formed, it took its name from the fact that Mr. Pitcher, one of its directors, lived in Revere. Since 1882 he has been continuously and prominently identified with rubber manufacture, having been for a number of years president of the Easthampton Rubber Thread Co., at Easthampton, Massachusetts. One of the most interesting remarks made by Mr. Pitcher when asked for some review of his rubber career was his eulogy on a number of his contemporaries. "I was very fortunate," he said, "in being associated with some big-hearted, whole-souled, helpful men. I name especially with reverence Mr. E. S. Converse, Mr. Geo. A. Alden and Henry C. Morse. They were enough to save a city."

The eightieth birthday party, given in his honor on Christmas Day, was not an invitation affair but simply an "open house," and it was attended by a great number of people, including not only his neighbors in Easthampton but many of his business associates from a considerable distance. And of all the number there, Mr. Pitcher was one of the least old.

A Few of the Latest Tires.

SPRING TIRE WITH A RUBBER BLOCK TREAD.

IN their search for a practical automobile wheel with the resilient qualities of the pneumatic and without its disadvantages, inventors have brought out numerous designs embodying spring hubs, spring spokes and spring rims, the majority of which

OHLSSON SPRING AND RUBBER BLOCK TIRE.

have proved either too expensive to manufacture in competition with the pneumatics, or impractical in actual operation. Here, however, is a wheel of entirely new design, which lays claim to at last having solved the problem. It has been examined in operation by a representative of the INDIA RUBBER WORLD, and seems to uphold the contentions of the designers. A good idea of the construction of this tire may be gained from the illustration. It has a solid rubber tread consisting of rubber blocks, each attached to a steel plate so that each plate and block is independent of the one adjacent to it. In the center of each plate is a depression or groove, so that when all plates are placed end to end a continuous channel is formed around the wheel. Through this channel runs a flexible, endless steel cable which binds the blocks securely together, resists the pressure of the springs and allows the tread to weave over the road, regardless of the condition of the surface. The felloe has a flat rim provided with two series of studs, over which the springs are set. Each plate also has two corresponding studs and is supported by two springs. Thus, it will be seen that the whole tire is of simple construction as well as substantial, there being no wear on any part except the rubber blocks. In case of injury to one of these blocks, it can be removed in a few minutes and a new one bolted on in its place. [The Ohlsson Spring Tire Co., 528 Bergen street, Brooklyn, New York.]

THE WHISTLE BLOWS WHEN THE TIRE IS FLAT.

Another device has recently been put on the market similar to the one described in December, except that here the rod is inserted into the tube instead of being situated outside, and the signal which it gives of the soft tire is by means of a whistle instead of by means of a bell. In this apparatus a valve is fitted with a slender rod projecting down into the tube a certain distance, and when the tire becomes sufficiently deflated so that the tread is pushed against the rod, the rod is pushed into the valve and causes the whistle to blow.

A NEW REPUBLIC TIRE TREAD

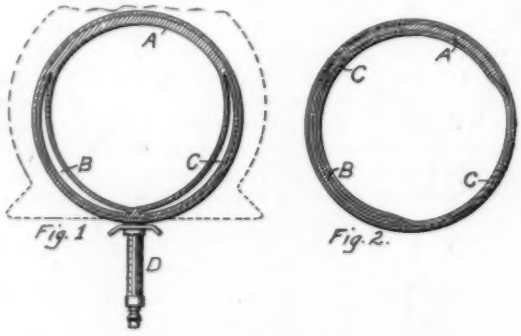
The accompanying illustration shows a new non-skid tire for use on light cars. It is called the "WM" tire, since the design forms these two letters. This tire is made in the following sizes: 30 x 3, 30 x 3½, 32 x 3½ inches. [The Republic Rubber Co., Youngstown, Ohio.]

REPUBLIC "WM" TIRE.

THREE PNEUMATIC TUBES IN ONE.

While all sorts of constructions and improvements in the outer casings of automobile tires have been introduced, very few changes have been made in the design of the inner tube. Here, however, is a tube which embodies three independent tubes in one.

On the exterior it resembles any ordinary inner tube, but by reference to the cross sectional views it will be seen that it differs radically from the usual construction. The three tubes are shown at *A B* and *C*. They may be inflated independently, one at a time, by means of a specially constructed tire valve *D*, which has three separate air passages leading to the three tubes. When the tube is placed in the tire the section *A* is first inflated by turning the valve so that the proper air duct communicates with this section. The compressed air in the tube *A* flattens the walls of the tubes *B* and *C* against the outer walls as shown in Fig. 1, and the tire is run with the one tube inflated until a puncture occurs. Then instead of having to replace the tube, or to repair the puncture, the valve is turned into such a position that either tube *B* or *C* may be inflated. In Fig. 2 the tube *C* is shown inflated so that it entirely fills the internal space of the tube *A*, and at the same



NEW TRIPLE INNER TUBE.

time increases the thickness of the tread portion of the tube. When this tube becomes punctured the third tube may be inflated and used until a third puncture occurs. The advantages of such a tube may be readily recognized by any driver who has had the experience of having to stop by the wayside and spend many valuable minutes in repairing a puncture. [U. S. Patent No. 1,078,515.]

New Rubber Goods in the Market.

PORTABLE LAMP WITH RUBBER SUCTION CUP.

SOMETHING entirely new in a portable electric lamp has recently made its appearance on the market. It embodies several new features which make for great convenience, including a rubber suction cup by means of which the lamp may be stuck to any smooth surface with the bulb and reflector pointing in any direction. In the illustration, *1* shows an adjustable and removable shade which fits any style of electric bulb. The lamp may be hung up by the hook *2* or clamped in a horizontal position on a bed or chair by the rubber covered clamp *3*. The rubber suction cup *4* is placed in the center of the base and by its use the lamp may be made to stick to a mirror, window or any smooth piece of furniture or metal. A ten foot cord is supplied with each lamp and this cannot become tangled since it is coiled up in the base *7* when not in use. [Wallace Novelty Co., 299 Madison avenue, New York City.]

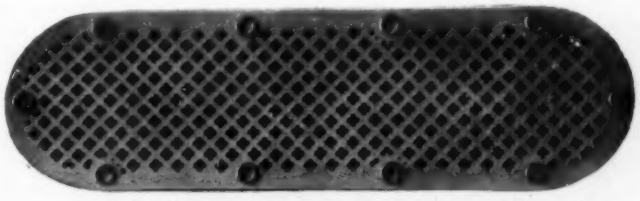
WALLACE LAMP, WITH RUBBER SUCTION CUP.

THE PNEUMATIC FLOATING DUCK BLIND.

Pneumatic boats, in combination with wading pants, have been described and illustrated in our pages as far back as August, 1895, but the illustration below shows a French device of the Unsinkable Boat or Duck Blind variety of such finished ihgenuity as to be capable of beguiling the most suspicious and wary of ducks, and of luring it within range of the sportsman's rifle. This boat—constructed of vulcanized rubber over heavy canvas—is oval in shape, slightly wider at the back than at the front, and has a large floating surface. It is quite steady, said to be unsinkable, and has four compartments, fitted with safety valves, which can be blown up by means of a pump, the upper compartment being designed to protect the sportsman from the waves in bad weather. In the bottom of the boat is a flat reinforced seat, also two openings or boots, fitted with pneumatic paddles. The boat is intended to be inflated on shore, after which the sportsman inserts his legs into the boots—supporting the device with a strap passed over his shoulder—and walks into the water to a depth which is sufficient to support him, when he may sit down. Then, by means of the rudder in the rear of the boat and the backward and forward movement of his legs, he is able to travel, easily and without fatigue, in any direction. Sockets are provided along the outer edge of the float in which grass, branches, etc., are placed to hide the hunter. (Abercrombie & Fitch Co., 53-57 West 36th street, New York.)

A NON-SLIP BATH MAT.

An India rubber mat for the bottom of the bath tub—which retains its position by the action of suction cups along its outer edge, as shown in the accompanying illustration—is another of the late inventions contributing to the comfort and convenience of man, adding to the feeling of general satisfaction induced by the bath, the further agreeable sensation of security; for this mat permits him to recline in the tub without any risk of slipping. [The Leyland & Birmingham Rubber Co., Limited, Leyland, Near Preston, England.]



INDIA RUBBER BATH MAT.

RAINCOATS.

Styles in raincoats continue to engage the attention of designers of ladies' outer garments, and the accompanying illustrations represent two of the latest attractive showings in this line. The women's coat, with its mandarin sleeves, convertible collar, detachable half belt, patch pockets and deep cuffs, is made of rubber-backed spun-silk Ottoman cloth; while the misses' Slip-on is of silk-finished rubberized cloth and has, besides the belt and pocket features, an inlaid velvet collar and raglan sleeve. Either of these coats may be had in tan, gray, black or blue, and the stitched brim rubber hat also illustrated may be had in tan or black.

WOMEN'S RAINCOAT.

MISSES' RAINCOAT AND HAT.

NEW TRADE PUBLICATIONS.

THE HODGMAN COMPANY'S 75th ANNIVERSARY BOOK.

THE Hodgman company does not say so in so many words, but it is fairly obvious that its motto is, "If a thing is worth doing it is worth doing well." At any rate, that is the idea one gets on looking over the book entitled "A Pioneer in Rubber" just issued by the company as a souvenir of the completion of three-quarters of a century of active business life. It is a most creditable book, creditable alike to author, artist, engraver, printer, paper maker and binder.

THE INDIA RUBBER WORLD of last July contained a three page story of the career of the Hodgman Rubber Co., as was proper considering the fact that this company, then completing its seventy-fifth year, is undoubtedly the oldest rubber manufacturing company continuously in existence in the United States, and in view of the further fact that the company has been under the management of one family during all this time, now being in the hands of the third generation of Hodgmans, with the fourth generation preparing to come on the scene in the early future.

This souvenir book tells the company's story, modestly but still in such a way that the reader gets a clear impression of the continuous growth of the corporation from its humble beginnings in 1838 to its present very considerable dimensions. The book opens with this paragraph:

"It would be hard to say how much rubber is the child, how much the parent, of present-day civilization. Rubber is the bed of birth, a source of solace to infancy, a giver of games and gladness to childhood, a maker of mirth to youth, an invaluable instrument of manhood's industry, an alleviator of the aches of age."

Now there is a paragraph quite out of the commonplace at least. If you are fond of alliteration you will follow on to see how long the author can keep it up, and if you are not fond of alliteration you will read on to see where it stops. At any rate, that paragraph hooks deep into your attention at once; and the story sustains the interest thus provoked to the end. In addition to the history of the Hodgman company there is an added chapter giving briefly the general story of rubber gathering and manufacture.

It is an octavo of 56 pages, printed on heavy India tinted coated paper; it has many fine halftone illustrations, including photographic reproductions of Daniel Hodgman, the founder of the enterprise, George F. and Charles A. Hodgman, of the second generation, and George B., Fred. A. and S. T. Hodgman, of the present generation, respectively president, vice-president and treasurer of the company today.

Souvenir books are of three kinds: first, those skimmed over and deposited in the basket to be removed at night; second, those glanced at and put on a corner of the desk to be skimmed over again later and then dropped in the basket; and third, those that are numbered and catalogued and put on the shelf in the permanent library. To this last class belongs the Hodgman souvenir book.

REQUIREMENTS OF INSULATED WIRE.

The requirements of insulated wire include maintenance of perfect condition in use as to hardness, flexibility and smoothness of surface. Each braid should be separately saturated. In a neat booklet dealing with this subject The American Insulated Wire & Cable Co., Chicago, claims that its products meet all these conditions. Each size of the finished product is made uniform in diameter.

A LIVE ADVERTISEMENT.

Advertising attracts sufficient attention when it is the right sort of advertising. A retailer in Fitchburg recently hit upon an idea to get people around his front windows which was eminently successful. He deals in rubbers that have a bear trade-mark—presumably these are the Wales-Goodyear rubbers, as this company has exploited its bear trade-mark for many years—and in order to impress the bear brand on the people of his town he installed in one of his large front windows a big cage containing three small black bears. It is hardly necessary to add that all the youngsters of the town, up to eighty years of age, spend a good deal of their time in front of that window.

CANVAS PUMPS WITH RUBBER SOLES.

The United States Rubber Co. has issued a supplementary net price list—date of December 1—of sporting and outing shoes, illustrating the shoes—made both in Bal. and Oxford—called the "Admiral" and the "Campfire." The feature of this price list, however, consists of the page devoted to pumps, which are

MEN'S AND WOMEN'S PUMPS WITH RUBBER SOLES.

made in white duck with white rubber soles and also in black duck with black rubber soles, in men's and women's sizes. While these pumps are evidently intended chiefly for wear on board yachts and around summer hotels, they probably will be used quite extensively by those frivolous young people who persist in doing the tango. The accompanying cut shows both the black and the white pumps.

DIARIES AND CALENDARS FOR 1914.

Some things pall by repetition; and again some things do not—as, for instance, a good dinner superimposed upon a keen appetite, a good cigar after the dinner, and a new diary and a fresh calendar at the beginning of each year.

A number of the firms connected in one way or another with the rubber industry have favored their friends and customers with a diary or a calendar for 1914.

The Birmingham Iron Foundry, of Derby, Connecticut, has sent out a limited number of handsome little pocket memorandum books with gilt edges and bound in dark green Russia leather. In addition to an ample number of blank pages for memoranda there are several pages in the front and back of the book full of general information of a useful character; for instance, the population of the different American cities, the value of the coins of foreign countries, and various tables to which one wishes frequently to refer and which nobody—his second year out of school—can remember.

John Royle & Sons, Paterson, New Jersey, machinery manufacturers, have favored their friends with a small pocket diary with space for four days on each page, and with calendars for the years 1914 and 1915. In addition to the diary section there are pages for addresses and for cash account—a very convenient little pocketbook.

The Apsley Rubber Co., of Hudson, Massachusetts, manufacturers of rubber footwear, have issued a useful desk diary 5 x 8 inches, with a page for each week, the whole mounted on heavy card board and provided with a cover of heavy ornamental paper; an exceedingly useful piece of desk equipment, with room enough for important memoranda of each day.

The Loewenthal Co., the scrap rubber house of New York City, contributes to the pleasure of the New Year by providing its patrons with a desk pad calendar mounted on a nickel standard. The calendar has a page 3 x 4 for each day of the year—one side of the page giving the date, together with a com-

plete calendar for three months, while the reverse side is intended for memoranda.

The New Jersey Rubber Co., of Lambertville, New Jersey, manufacturers of all kinds of reclaimed rubber, also send out a calendar pad to be used on a metal standard, similar to the one described above, having the date on one side and space for memoranda on the other.

J. W. Coulston & Co., importers of paints and colors, of 80 Maiden Lane, New York, have mailed to their customers a desk memorandum calendar 4 x 7 inches in size, having a page for each week, the calendar pages being interleaved with information regarding the materials which the house imports.

A number of handsome wall calendars have been received in this office, among which the following may be mentioned: The calendar issued by the United States Rubber Co. is generous in proportions, being 20 inches wide by 32 inches long, and displays a striking panel in colors 15 x 21 inches in size. This panel shows in the centre the handsome marble building owned and occupied by the company, at Fifty-eighth street and Broadway, New York, whose twenty stories looming above everything in that part of the town can be seen from a great distance. This building is but a short block from Columbus Circle, where there are two famous monuments—the Columbus monument, which has stood in the centre of the circle for many years, and the beautiful Maine monument, in commemoration of the heroes who went to their death in Havana harbor fifteen years ago. Both of these monuments are shown in the panel.

The Textile Finishing Machine Co., of Providence, Rhode Island, manufacturers of dyeing, drying and other machinery, has supplied its customers with a large wall calendar, 22 x 24 inches in size, which shows a finely colored reproduction of a fresco in the "House of the Vettii," Pompeii, known as "The Dyers."

Tyson Brothers, makers of rubber substitutes and chemicals, of Carteret, New Jersey, have issued an artistic wall calendar, 11 x 14 inches in size, with a handsome colored panel in the center showing a woodside road. This is a calendar that is likely to be carried home.

Distinct from the calendar mentioned above is the one issued by The Stamford Rubber Supply Co., makers of rubber substitutes, Stamford, Connecticut. This is intended for the office. It is a plain board mount on which there are 365 leaves, one for each day, the date being displayed in type over 3 inches high, so as to be visible at a considerable distance.

Those who have received one of the calendars distributed—probably in not too large quantities—by the Adamson Machine Co., makers of rubber machinery, of Akron, Ohio, may consider themselves among the very fortunate, for it is a fine piece of art. The calendar consists of a cream-colored mat fastened to a buff card with a silk ribbon, the extreme dimensions being 15 x 18 inches. The upper part of the calendar is filled with a triple panel showing in a gilt frame a soft evening landscape. The sun has just set and the golden clouds in the sky are reflected in the quiet waters of a gentle stream. Sloping banks of green and a little cluster of trees add to the general effect. It is printed in very delicate colors and makes a charming picture. Very few of these calendars will linger in the office—they are destined to hang in a great many "best" rooms.

VARIOUS HOLIDAY SOUVENIRS.

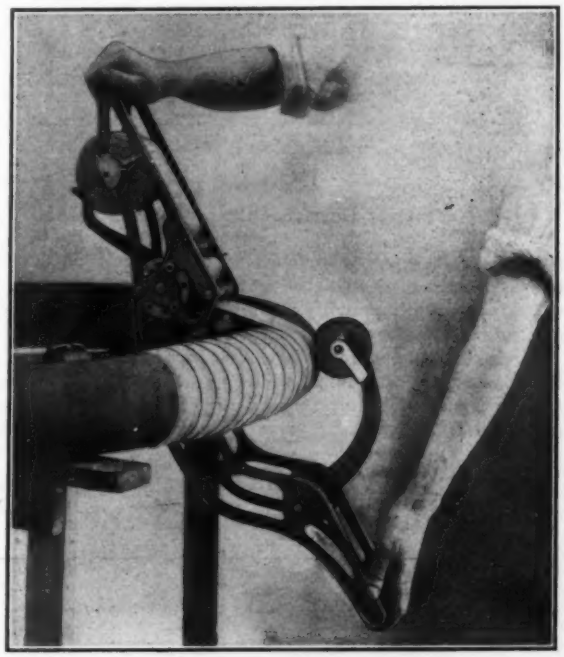
The Cell Drier Machine Co., Taunton, Massachusetts, has favored its customers with a useful souvenir in the shape of a brass hand blotter, set off with red, giving a very striking color effect and having a curved blotting surface.

Mr. Geo. W. Watkinson, of the Standard Asphalt & Rubber Co., 185 Madison avenue, New York, has mailed out a large number of rubber stockings made from the famous "M. R. X."

The J. H. Day Co., manufacturers of rubber mill machinery, Cincinnati, Ohio, and The Federal Rubber Manufacturing Co., of Milwaukee, Wisconsin, distributed cards of Christmas greeting among their friends and patrons.

TIRE WRAPPER FOR REPAIR WORK.

In the garage or repair shop the operation of retreading tires is usually performed by wrapping the tape around the tire by means of the hands alone. This requires skilled workmanship as well as considerable physical strength, and often results in uneven pressures being produced in different parts of the tire. The hand-operated winder shown in the accompanying illustration is claimed to overcome this difficulty. In operation, the wet bandage, tightly wound on its spool, is dropped into a recessed slot in the frame and the pressure



THE ROSSMAN TIRE WRAPPER.

arm is released against the bandage. A portion of the bandage is unwound and passed through the guides and once around the tire, establishing an overlap to secure the end. The tire is secured in a horizontal position, as shown, and the roller arm clasped around it. Then the machine is simply rotated, causing the bandage to be drawn from the spool and tightly wrapped around the tire. The average tire requires about three 20-yard bandages, depending upon the amount of overlap, which is regulated at will by the operator. The machine will wrap any tire from 2½ to 6 inches in size. In order that the tire be wrapped very tightly, it is necessary that the bandage itself be wound tightly upon its spindle; and to accomplish this result, a special winder has been designed, which stretches the bandage tightly around the spindle and passes it through water at the same time. [R. G. Rossman, Seattle, Washington.]

PROPOSALS FOR GOVERNMENT SUPPLIES.

The Bureau of Supplies and Accounts, Navy Department, Washington, D. C., will receive bids until January 6 for furnishing the following materials. Firms interested should make application to the Bureau of Supplies and Accounts, giving the schedule number desired: Schedule 6152, rubber fire hose, unlined linen fire hose, upper-deck fire hose, flexible metallic hose, garden hose, suction hose, wash-deck hose. Schedule 6154, flexible metallic hose, rubber hose. Report No. 1591.

New Machines and Appliances.

THE LATEST SLITTING AND REWINDING MACHINE.

THE slitting and rewinding of sheet rubber and rubber-coated fabrics is a process which increases in difficulty in proportion as the requirements call for accurate work. In most machines designed for this purpose, the problem of slitting the material has usually been considered as distinct

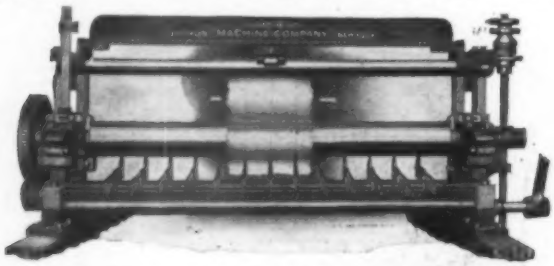


FIG. 1.—DETAIL OF CUTTING DISCS AND STEEL ROLLER.

from the problem of rewinding. In a new machine which has just been placed upon the market the rewinding device assists in the slitting of the material and the two units of the machine have been made inter-dependent.

Several innovations have been introduced in this machine, which has already been installed in a number of the prominent rubber factories. The most noteworthy feature is the device used to slit the material. Instead of using a pair of rotary cutters which shear the material, the device used in this machine is called a "score cutter." Unlike the rotary shear, it does not actually cut through the material, but really presses through it against a steel roller. The V-shaped edge of the cutting wheel cleaves through the fabric the same as a chisel.

Referring to the drawings, Fig. 2 shows a roll of cloth *A* threaded in one of several possible ways to the rewinding shaft *B*. The cutting wheels *C* are pivoted in the end of levers *D* which rest upon a crossbar *E*. This bar extends the full width of the machine and may be raised or lowered by means of a cam *F* in order to bring the cutting wheels into or out of contact with the steel roller *G*. This roller is made of much harder material than the cutting wheels, in order that it may not be scored and thus require regrinding. The cutters *C* are arranged so that they may be easily removed for sharpening. In order that the cutters may be pressed against the roller *G* with some force and with a somewhat yielding pressure, a leaf spring *H* is attached at the rear end of each lever *D*, the opposite end of the spring being fastened to the frame of the machine.

The amount of pressure which may be brought to bear upon the material which is being rewound upon the shaft *B* may be controlled by a riding roller *K*. This roller extends the full width of the machine and its pressure upon the material is varied by means of counterweights suspended from cables attached to pinions which operate in racks secured to the bearings of the roller *K*. Fig. 2 shows this riding roller raised for convenience in threading the material onto the rewinding shaft. It will be noticed that the fabric passes under a swinging roller *L* which serves to put a tension upon the material before it reaches the cutters. The cutting wheels may be arranged in any manner and at any desired distance apart for forming rewound rolls of different widths. In case the fabric is not entirely cut through by the wheels *C* a series of seam-slipping blades *M* is arranged above the idle roller *N* so that the strips are separated before reaching the rewinding shaft *B*. The construction of the cutting discs and of the steel roller *G* is seen in Fig. 1, which shows their arrangement in relation to the rewinding shaft. The latter is mounted in vertical guides which allow it to be raised as the diameter of the rewound rolls increases. Fig. 3 shows the cutting wheel in its raised position and shows the machine delivering fabric from flat folds *O* over a guide board *P* and finally on to the rewind shaft after passing between the cutters and the steel roller.

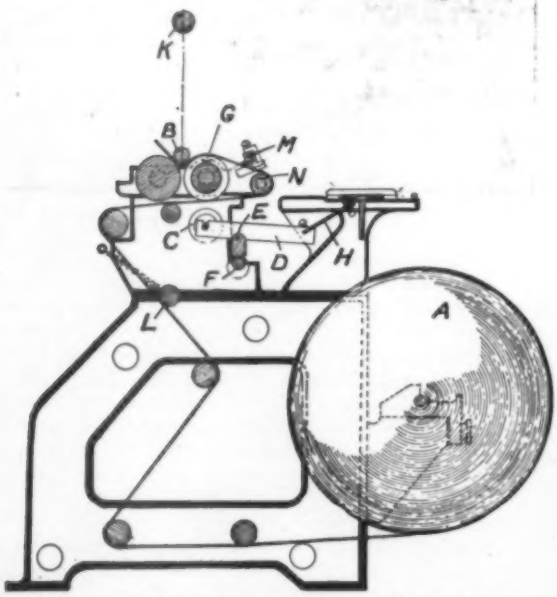


FIG. 2.—CAMERON MACHINE WITH CUTTING DISCS LOWERED.

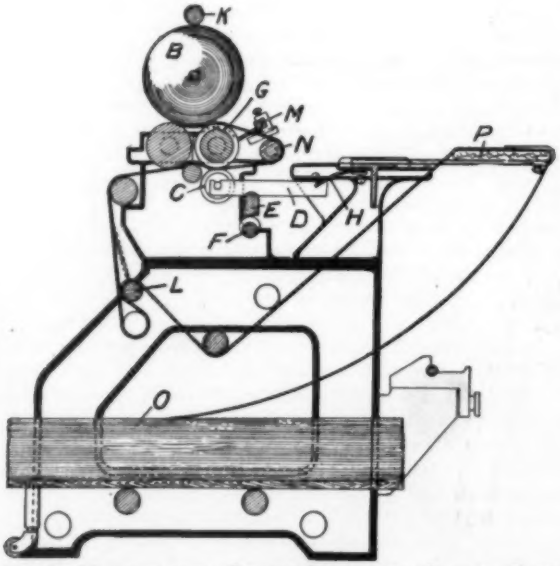
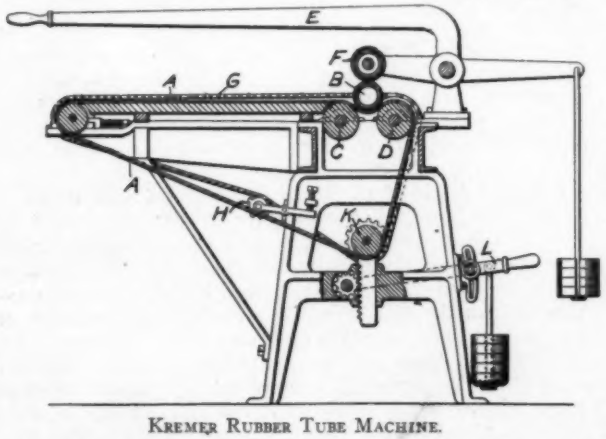


FIG. 3.—MACHINE WITH CUTTERS RAISED INTO SLITTING POSITION.

The rewound rolls sometimes have a tendency to become irregular and to bulge outwardly at the ends. In order to prevent this a number of adjustable fingers are arranged at one side of the rewinding shaft, so that the ends of the fingers rest upon the shaft and guide the material in a straight line as it is rewound. Like the cutting discs these fingers may be adjusted to accommodate strips of any width. [Cameron Machine Co., 57 Poplar street, Brooklyn, New York.]

NEW MACHINES FOR FORMING RUBBER TUBES.

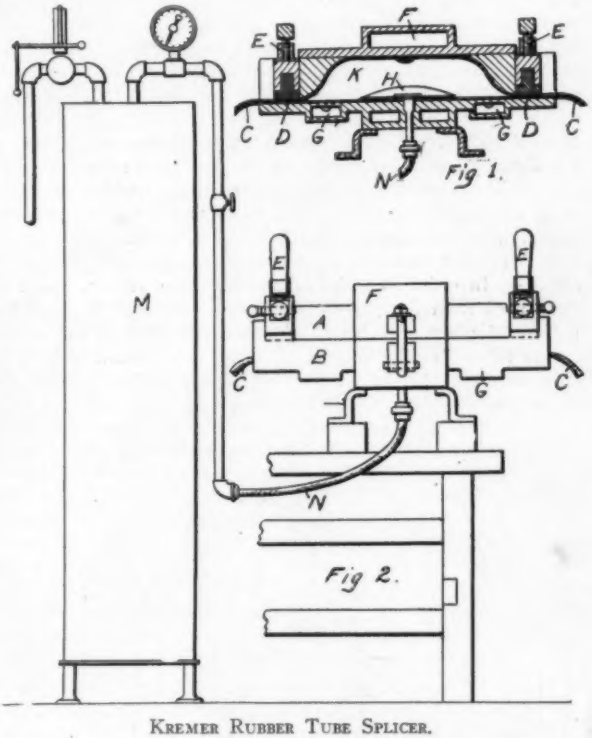
A machine of new design, in which rubber tubes are built up over a floating mandril, is the subject of a recent patent. By reference to the drawings herewith the operation of this machine will be readily understood. A sheet of thin rubber, of much less thickness than the walls of the finished tube, is placed upon a web or carrier *A*. This web is made of felt so as to allow the passage of air through it and to prevent the rubber from sticking to it. The sheet of rubber is carried toward the rear of the machine and under the mandril *B* which floats between two rollers *C* and *D*. Since the surface of the mandril is smooth the rubber will adhere to it and be carried around as the rollers continue to revolve. The rubber is wrapped around the mandril until a tube of the desired thickness is formed. By means of the lever *E* the roller *F* is made to press down upon the rubber as it is wound upon the mandril, thus excluding all air bubbles from the tube. The carrier is driven by a chain *G* which is kept tightened by the adjustable idler gear *H*. In order to keep the mandril pressed up against the roller *F* the carrier *A* passes under a roller *K* which is held down by weights suspended from the lever *L*. As soon as the tube has been built up to the proper thickness the hand lever *E* is raised, which allows the mandril to travel to the rear of the machine, where the



KREMER RUBBER TUBE MACHINE.

finished tube is removed. [U. S. Patent No. 1,078,099. F. W. Kremer.]

As a sequel to the tube building process described above, the inventor of that machine has also designed another machine for splicing the ends of rubber tubes, especially automobile tires, by the utilization of compressed air. Briefly, the process consists in clamping a short section of the tire in a mold so that the air is confined in a small space, the section of the tire in the mold including the ends to be spliced or vulcanized. Fig. 1 shows the mold in longitudinal section, while Fig. 2 shows an exterior view of the mold and the compressed air tank. The mold consists of two parts, *A* and *B* between which the two ends of the tire *C* are clamped. In order to form an air-tight chamber the ends of the upper part *A* are provided with rubber blocks *D* which press down upon the tube, these blocks being raised or lowered by the screws *E*. Surrounding the mold directly above the ends of the tube are steam jackets *F* and near the ends of the mold are water jackets *G* into which cooling water is introduced. The tubes are spliced preferably at the point where the air valve is located in order that the ends of the tube and the rubber plate *H* of the valve may be vulcanized in one operation. When the tube has been clamped in position,



KREMER RUBBER TUBE SPLICER.

air is admitted under high pressure from the tank *M* into the space *K*, through the hose *N*, thus causing the tube to be held firmly against the walls of the vulcanizer, which are heated by the steam jacket. The cooling water prevents the vulcanization of any part of the tube except that near the ends to be spliced. [U. S. Patent No. 1,078,097. F. W. Kremer.]

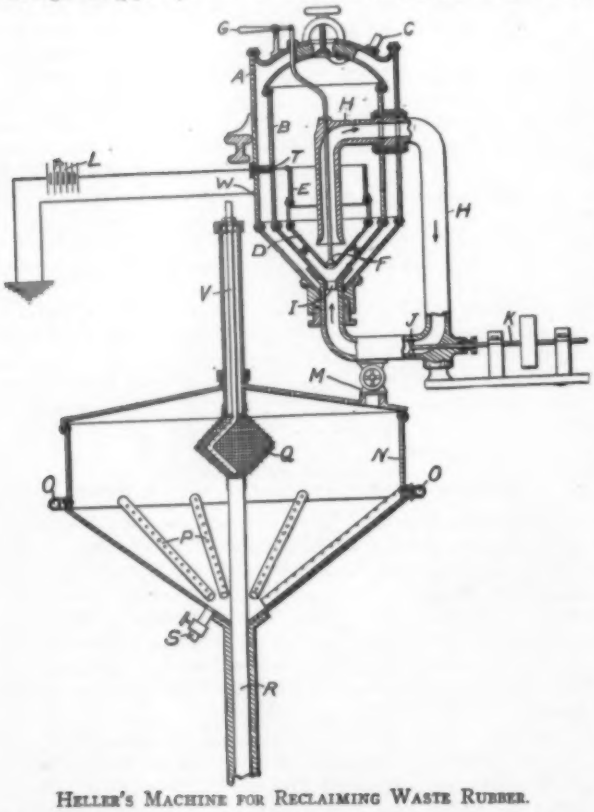
MACHINE FOR RECLAMATION OF RUBBER WASTE.

The machine illustrated in the accompanying drawing is designed for the purpose of reclaiming vulcanized rubber waste and for removing from the rubber the materials which have been mixed with it, such as the compounding ingredients, particles of fabric, etc. The process comprises the subjection of the rubber waste, after it has been cut into small particles, to the action of a reclaiming solution in the presence of heat, and simultaneously subjecting the rubber to the electrolytic action of an electric current.

The apparatus comprises a cylinder *A* containing a tank *B*. The space between these two vessels forms a heating chamber which is supplied with steam through the inlet pipe *C*. In the lower end of the tank *B* is a funnel-shaped body *D* having a zinc cylinder *E* attached at its upper end. The lower end of this funnel is closed by a valve *F* which is operated by the lever *G*. In order to provide a means for circulating the materials through the tank, the pipe *H* extends from the lower part of the funnel *D*, out at the side of the tank, and around to the lower end at *I*. A propeller *J* operated by a pulley on the shaft *K* is inserted in the pipe *H* to force the circulation.

In carrying out the process a sufficient quantity of the waste material is placed in the tank to cover the pipe *H*, the valve *F*

being closed. The solution commonly used for each 100 pounds of rubber is 600 pounds of water, 21 pounds of sodium hydrate or potassium hydrate, and one pound of ferric sulphate. The solution is kept heated by steam surrounding the tank and is subjected to the action of an electric current supplied from a generator or battery *L*, one wire being insulated at *T* and attached to the zinc cylinder while the other is attached to any metal part of the apparatus, such as the cylinder at *W*. The steam is introduced under a pressure of from 95 to 160 pounds while the current supplied is about 800 amperes at 4.6 volts. The material is circulated through the pipe *H* by means of the propeller *J* so that the electric current acts upon every particle of the solution as it passes up around the zinc cylinder. This process is continued from 10 to 24 hours, after which the valve *F* is raised, allowing the solution to run down through the pipe *M* into the washing cylinder *N*. This washing tank is filled with hot water to remove the chemicals, especially the caustic alkalies. In order to assist in cleansing the rubber, steam is introduced from the pipe *O* surrounding the tank through the perforated pipes *P*. This agitates the solution and allows the rubber to sink to the bottom. The hollow screened body *Q* is then lowered into the solution above the rubber so that the waste water and chemicals are drained off through the pipe *R*. This washing process is repeated, fresh water being introduced through the pipe *V*, until all foreign materials are washed away



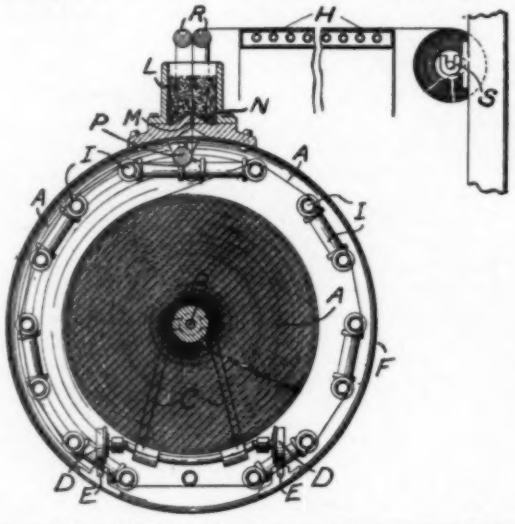
HELLER'S MACHINE FOR RECLAIMING WASTE RUBBER.

from the rubber, after which the pure water and rubber are allowed to run out through the pipe *S*. [U. S. Patent, Reissue No. 13,613. C. S. Heller.]

A NEW METHOD OF COATING FABRICS.

Among the newer machines designed for use in connection with the manufacture of rubber goods is one recently invented by Louis P. Destribats of Trenton, New Jersey. The object of the invention is to provide an improved means of exhausting the air from the fabric and coating the material with rubber before the fabric comes into contact with the external atmosphere. The fabric is also heated by means of steam coils at the same time that the air is exhausted so that it is in a perfectly dry condition when it reaches the rubber.

Referring to the drawing herewith, which shows a cross section looking toward the end of the machine, the roll of fabric *A* to be treated is mounted upon the shaft *B* in the frame *C*. This frame is set upon rollers *D*, which run upon a track *E* in the bottom of the cylinder *F*. This cylinder has a removable door to allow the roll of fabric to be run in and out of the cylinder. The air is exhausted from the cylinder by means of an ordinary vacuum pump. Surrounding the roll of fabric is a series of steam pipes *I* with inlet and outlet at the rear end of the cylinder. On top of the cylinder is a trough *L* provided with a long slot *M* and a pair of flaps *N*, which prevent the liquid rubber from being drawn into the cylinder when the air is exhausted.



DESTRIBATS' NEW VACUUM MACHINE FOR IMPREGNATING FABRICS.

A roll of fabric which is to be impregnated with rubber is placed in the frame *C* and run into the cylinder. The end of the cloth *A* is then carried around the steam pipes *I* and under the roller *P*, and then vertically through the slot *M* into the rubber. Before the cloth passes into the rubber, however, the air is exhausted from the cylinder and likewise from the interstices of the fabric, so that when the cloth enters the liquid rubber the latter will be drawn into the spaces between the threads and the cloth become thoroughly impregnated. The coated fabric then passes between a pair of rollers *R* and over a heater *H*, after which the coated and dried fabric is wound up on the roller *S*.

WESTERN CITIES PASS FENDER ORDINANCES.

A bill has recently been introduced in the city council of Cleveland, Ohio, providing for safety bumper equipment on all motor trucks operated in that city. In Detroit, Michigan, where a similar ordinance was passed some time ago, the police commissioner has extended the time of enforcement from December 1 to January 1, in view of the fact that "the truck fender business is still in its infancy and no perfect type of fender has yet been developed." Cleveland is much interested in the outcome of the Detroit enactment, Chicago is considering the adoption of a similar regulation, and other cities will no doubt take steps in the same direction in the near future; and a rubber bumper will probably be duly considered and adopted in the production of a "perfect type" of fender such as will meet the requirements of this new law, one of which is that the front bar of the fender shall not be more than six inches from the ground when in operation.

The India Rubber Trade in Great Britain.

By Our Regular Correspondent.

THE illustrated article on Singapore as the rubber market of the future, given in the November issue of THE INDIA RUBBER WORLD, has been read with interest by manufacturers. The idea will probably not commend itself to certain important London interests, but manufacturers express the opinion that the change of venue would lead to a reduction of about 4d. per pound as compared with purchase in London. The London scheme for grading plantation rubber into four classes has been favorably received by the trade, uniformity of quality being the great desideratum. Fine Hard is always bought as such, without any samples being submitted and without any anxiety on the part of the buyer as to what the delivery will be like. At the present time plantation from this or that source is bought to sample, and strict watch is kept that the deliveries are equal to sample, especially when the market is against the rubber broker. Cases have occurred recently where later deliveries have been obviously inferior to sample and first deliveries, and the result has been rejection.

Perhaps there has been too great a tendency during the last year to put down anything that has gone wrong in the factory to inequalities in the plantation rubber. It is a suggestion that cannot easily be refuted and has the great advantage of absolving the factory management from blame. Contracts for delivery over next year are being made at several pence per pound advance on those which have lately ruled; which portends a better state of affairs for the plantation companies, unless they fail to deliver to sample and thus invite trouble. Some discussion has taken place in London as to the desirability of the regular publication of plantation yield statistics. Such information is certainly useful to the manufacturer and conduces more to his interests than to those of the plantation industry.

Turning to wild African rubber—the recent trend of the market has, of course, been all against its production and sale at a profit, a serious financial matter for many of the districts concerned. Sentiment is supposed to be dissociated from business but it is not altogether pleasant to read the speeches of the financial magnates of the planting industry, wherein the annihilation of the African rubber collection is set up as an important object to be achieved. Certainly there is another side to the question—that of the hardships suffered by the collectors in swamp and forest and the toll of human life exacted by the industry. This subject has been noticed in some of our prominent reviews and journals, but is too large to receive more than a bare reference here. From the manufacturer's point of view the shortage in the present supply of certain brands of Africans is a cause for regret, and this will have its baneful result in the future, the present tendency being to banish Africans from mixing formulæ because of the uncertainty of continuity in supplies. This is an important matter, as once a formula has proved satisfactory there is a strong disinclination to make any alteration in it.

This leads one naturally on to the question of reclaimed rubber. It might be thought that with plantation in the neighborhood of 2s. per pound the competition of reclaimed would practically cease. This, however, is not the case, tho it is quite probable that the reclaimers have suffered some reduction of business. The alteration of formulæ arises again here, and where a particular brand of reclaimed rubber has given satisfaction for years manufacturers are chary of replacing it by a mixture of plantation and mineral at the same price; and this mainly because they cannot foretell the course of the raw rubber market, and the exigencies of selling price of the goods may at any time necessitate a return to the reclaimed, which may or may not be available. What is perhaps inevitable in the reclaiming industry is a somewhat lower range of prices, a matter which depends largely upon the scrap rubber dealers, who have persistently held out for higher prices than the state of the rubber market warranted. In view of the undoubted fact that some large manufacturers have reduced their purchases of reclaimed rubber, it is obviously necessary for scrap dealers to come into line with reclaimers if the latter have to reduce prices to keep business alive.

REFORMED RUBBER.

Four years ago, at the height of the rubber boom, the Premier Reforming Co., Limited, was brought out, the prospectus issued to the public containing testimonials to the value and importance of the process from men prominently connected with the scientific and manufacturing sides of the rubber industry. Now it has been found necessary to voluntarily wind up the company, preparatory to forming a new company in which the name Reforming does not appear. The new company—to be called the Headway Rubber Co.—is to be mainly concerned with the manufacture of a tire, presumably from new rubber. *Prima facie* this looks as if reformed rubber has not exactly come up to expectations. Altogether, however, there have been five or six companies making reformed rubber goods under one or another patent, and in the absence of any authoritative figures as to the business these companies have done or are doing, it would be unfair to jump to the conclusion that all reforming is a failure. That the claims made for the process as an epoch-making advance in the rubber industry were unduly exaggerated is a fact which can hardly be denied.

This fact, indeed, I think, is generally admitted; but this is not the same thing as saying that there is nothing at all in the process—or perhaps I ought to say processes. Leaving out of account the validity of the different patents—the master patent being claimed by the Simplex Rubber Co., Limited, of London—it is obvious to me that while some qualities of rubber may be suited for reforming other qualities are quite unsuitable and are incapable of competing with a new rubber mixing. I am not writing at random, because I have had under observation a reformed rubber article being used alongside one of new rubber of similar composition made at the same time. These goods have been in use for 2½ years and both are giving satisfaction.

LAWN TENNIS BALLS.

Great Britain differs from the bulk of the countries of the world in that the popular game of lawn tennis is nearly always played on grass, and that the season is limited to the summer months. In most countries the hard court made in various ways is the rule. Now, however, there is a decided tendency to play the game all the year round on hard courts, and quite a number of the modern so-called "En-tout-cas" have been put down in the last year or two. The writer, as the recipient of a prize for the veterans' handicap at an open tournament last summer, is playing assiduously through the winter for the first time, in the hope of further triumphs, and he has noticed that many other players of advanced age are taking the opportunity of getting some really good exercise. This by way of an exordium to the statement that there is likely to be a growing demand for lawn tennis balls in the winter in England.

Different ideas prevail as to the most suitable ball for hard courts, but at any rate at the not unimportant club with which I am connected play has been carried on with the ordinary

Slazenger's match ball as used in the summer on grass courts. Shareholders in rubber plantations seem to think that the erstwhile shilling ball ought to be obtainable now at about sixpence. Personally, as knowing a little something about the manufacture, I am not looking forward to any such sweeping reduction, all the more as there is a working agreement as to prices between the British and Continental manufacturers. Hard court play certainly takes more out of the balls and also out of rubber-soled shoes than does grass play—which is, of course, to the benefit of the makers thereof. The hemp-soled canvas tennis shoes so largely used on the Continent are very little in evidence in England on hard courts, no doubt because players like to stick to the same outfit all the year round.

PERSONAL MENTION.

Mr. John Sykes, chairman of the Card Clothing Manufacturers' Association and head of the Lindley branch works, has been presented with the freedom of Huddersfield. The conferring of the freedom of English towns is a rare event and I believe that this is only the second time that the honor has been conferred at Huddersfield.

Mr. H. S. Walker, manager of the rubber and balata departments at the Rochdale asbestos mills of Messrs. Turner Bros., Limited, who met with a very serious accident at the works early in last year, is now, I am glad to be able to say, back at business, and there is every prospect of a permanent recovery from his disablement.

The directors of the Mersey Reclaiming Co., Limited, of Stockport, having definitely decided not to recommence business after the fire of last year, the late manager, Mr. G. Gray, is, I understand, open for a similar post. At one time connected with the Dunlop works at Birmingham, Mr. Gray subsequently went to America, where he was concerned with reclaiming, and may therefore be considered to have an all-round knowledge of this subject.

Mr. Eccles, at one time manager of the Liverpool Rubber Co., and afterwards of Messrs. F. Reddaway & Co., Limited, is now back with the latter firm, in the position of commercial manager. The works manager is Dr. Thiel, who had been previously at Messrs. Reddaway's before going to the Calmon works at Hamburg. Change of personnel is by no means uncommon in our rubber works, but it is rare for a man to return to a works he has left.

THE LONDON RUBBER SHOW OF 1914.

As already mentioned in the columns of this publication, an International Rubber and Allied Industries Exhibition will be held in Royal Agricultural Hall, London, for two weeks, from June 24 to July 9, 1914. Over thirty-five British and foreign governments have already decided to take part officially in this exposition. It is under the management of Mr. A. Staines Manders, very well known to all the American rubber trade by reason of the Rubber Exposition held in September and October, 1912, in New York City, which he organized. This London show, to be held next June, will be Mr. Manders' fourth international rubber exposition, and he promises that it will be by far the best of them all. The Rubber Conference held in conjunction with this exposition will begin June 30 with Dr. Joseph Torrey, the well-known writer on rubber subjects, as chairman.

HECHT BROS. BECOME ALCAN & CIE.

The retirement of Mr. Ernest Hecht from the firm of Hecht, Frères & Cie, crude rubber dealers at 75, rue St. Lazare, Paris, France, has made it necessary, in conformity to the French law, to change the name of the concern, and it will hereafter be known as Alcan & Cie, Mr. Alcan having been a partner in the company for many of the sixty years of its existence. The business will continue in every way as heretofore.

AMERICAN ASSOCIATION OF COMMERCE AND TRADE, BERLIN.

The eleventh annual general meeting of the above-named association held on November 29, was the fourth consecutive occasion on which President I. Wolff, Jr., has acted in that capacity. He was re-elected to that office for the coming year, Herr Richard Sierling being chosen as treasurer. In the president's address reference was made to the new American tariff and its prospective effects as well as to the share of the association in its preparation. Postal reform between the United States and Germany had likewise been advocated with the view of letters posted in Berlin on Fridays catching the English steamers on Saturdays. As usual, the report of the secretary, Professor George S. Atwood, is full of information as to the doings of the association. It refers specially to the proposed establishment of a Bureau of Publicity in the interest of American manufacturers. The reports of the standing committees contain full details of the work done in the various sections during the year 1913, which was among the most active in the records of the association.

TRADE NEWS NOTES.

An official invitation to take part in the International Rubber Congress and Exhibition to be held in Batavia, Java, September 8 to October 10, 1914, has been extended to the United States and the Philippines, through the Legation of the Netherlands at Washington.

The imports of raw and waste rubber into Moscow, Russia, for the first half of 1913 amounted to $11,264,000, representing a gain of $2,685,500 over the imports for the same period in 1912. The rubber waste exports from Moscow to the United States for the first six months of 1913 amounted to $10,314, or $11,548, less than those of the corresponding six months of 1912.

The total commerce of Belgium in rubber for the year 1912 was $50,342,175, of which imports and exports represented respectively $27,776,805 and $22,565,370.

According to the report of Consul P. Emerson Taylor, located at Port of Spain, the total area devoted to rubber in Trinidad has been increased from 2,000 acres in 1910-11 to 2,900 acres in 1911-12.

RUBBER OUTPUT FROM THE FEDERATED MALAY STATES.

According to information cabled by the Federated Malay States Government to the Malay States Information Agency, the exports of plantation rubber from the Federated Malay States for the month of November amounted to 4,618,880 pounds, as compared with 4,838,400 pounds in October; making the total for the eleven months of the present year 46,697,569 pounds, as compared with 31,038,486 pounds for the corresponding period last year.

Appended are the comparative statistics for 1911 and 1912:

	1911.	1912.	1913.
January	1,329,170	2,730,576	4,772,880
February	1,490,849	2,715,767	3,936,529
March	1,916,219	3,089,583	3,890,880
April	1,235,917	2,285,390	3,642,240
May	1,147,488	2,255,034	2,744,000
June	1,229,754	2,305,915	4,491,200
July	1,581,993	2,695,861	3,989,440
August	1,651,845	3,655,535	5,293,120
September	1,677,062	2,968,121	4,480,000
October	2,182,857	3,215,231	4,838,400
November	2,104,317	3,121,473	4,618,880
Total	17,547,471	31,038,486	46,697,569

PARA RUBBER CULTURE IN DUTCH GUIANA.

By a Resident Correspondent.

AS the area of Pará rubber culture increases in Dutch Guiana at the rate of many thousand trees a year, the question arises: Will not the supply so far surpass the demand that the price—which is now so low—will fall below the profit-giving line?

TWO-YEAR-OLD PARA TREES ON A SURINAM PLANTATION.

As the soil in Surinam is well adapted to rubber culture, and as rubber can be produced so cheaply in the colony, there is little to fear if the field of consumption increases throughout the world. It would seem that there is no valid cause for alarm among those who are interested in rubber plantations in the colonies which have been started right and are managed right.

The uses of rubber are daily becoming so varied that the supply must constantly and largely increase in order to meet the demand. The field for the use of Pará rubber seems to have no limit, and the money put into sound rubber enterprises by companies and individuals, who are cultivating it with care and good management combined with sound business principles, is well invested.

TAPPING SEVEN-YEAR-OLD PARA TREES ON A SURINAM PLANTATION.

In Surinam, however, the Pará rubber industry can be said to be practically in the nursery stage, for the reason that twelve or fifteen years ago, when other tropical countries with suitable soil conditions were cultivating largely, Dutch Guiana was yet asleep. This shortsighted policy on the part of the planters and others is one of the main reasons why the colony's rubber culture is so backward. Capital would certainly have found its way to Dutch Guiana if the colony, in 1910-11, when the rubber craze was at its highest, had had something to offer.

Dutch Guiana's harvest is yet to come, and the plantations which today could be operated have to face another problem—which, however, is not so serious—skilled labor for tapping the trees.

It is deplorable that the Dutch in Surinam are such procrastinators. Those in the Far East, however, display more energy and more goaheadness, with a touch of the American "get up" which accounts for their superiority over their brothers in Dutch Guiana in matters of business.

In connection with skilled labor, the plantations will have to face this problem in a very short time. The Javanese and others who are conversant with the methods of tapping the rubber tree are few and far between and, as natural, their services are in great demand. To thoroughly operate a plantation, with many thousand trees, will therefore be a difficult matter when only a very few tappers can be procured. This, however, will right itself in time, for the Javanese is intelligent and takes kindly to this business. Today, those estates that are ready for tapping operations can be compared with an army of soldiers armed with up-to-date rifles but minus ammunition. This we believe is responsible in a great measure for the small production of rubber by the colony so far.

JAVANESE RUBBER TAPPERS IN DUTCH GUIANA.

It is estimated that only a very small portion of the possible rubber supply of Dutch Guiana has ever been gathered. If this is true, there are several thousand kilos of Pará rubber to be gathered from the plantations, which could be taken out each year.

AN APPEAL TO THE STOCKHOLDERS.

At the last annual meeting of the Port Dickson-Lukut (F. M. S.) Rubber Estates, the chairman, Sir Wm. Hood Treacher, said:

"This beautiful virgin plantation rubber, which is grown on British soil and with British money, gets the price of 1s. per pound lower than the hard Para, which is grown on foreign soil and exploited principally by foreign money, and which contains 25 per cent. of water and other useless matter. Some of the magnates of the rubber-producing world are putting their heads together and trying to formulate some method by which we may be delivered from the house of bondage of the auction-sale system, and get into closer touch with the manufacturer, the actual user of the rubber. I should advise all the shareholders of this and other companies to support their directors who are working in this direction, and to apply the whip and the spur to those who hold back and trust entirely to Providence."

RUBBER NOTES FROM BRITISH GUIANA.

By Our Regular Correspondent.

THE most important event that has happened since I last wrote is the return of the Governor, Sir Walter Egerton, K. C. M. G., from his journey through the *hinterland* of this colony, made with the object of ascertaining the possibility of developing the country by means of a railroad. His Excellency went through the bush, across the Rupununi savannahs, as far as the Brazilian frontier, and he and all the members of his party (which included a railway engineer named Bland, in the employ of the Nigeria government, Dr. K. S. Wise, government bacteriologist, and Mr. W. C. Anderson, forestry officer), returned looking all the better for their experience. His Excellency has returned full of enthusiasm. In the course of an interview he said that the savannahs could support an enormous quantity of cattle, and those he saw up there he described as being very fat and in excellent condition. "I see no reason," he added, "why almost any tropical product should not be grown there with success. But it is no use growing anything there at present because of lack of means for transporting the produce to market. Settlers must have cheap means of communication with the coast." Subsequently he made a more considered pronouncement in the Combined Court, which was slightly more qualified but not less enthusiastic. I quote his remarks under this head in part. He said:

"I have just returned from a memorable journey through the interior of the colony up to the Brazilian boundary on the Takutu river. I was fortunate in being able to travel with Mr. Bland, the railway engineer brought here to examine into the best route for and the probable cost of building a railway through our magnificent timber forests to give cheap and rapid connection with the savannahs and with the Brazilian Province of Amazonas.

"I was much impressed with the wealth of greenheart and other timber that would be brought within reach in the forest region by such a railway and by the large area of fertile land there awaiting the tropical agriculturist; but it is doubtless in the great savannah plains that the most rapid development will take place if the 'transport-to-coast' problem is ever solved. There are said to be some 9,000 head of cattle on the savannahs. They are lost in the vast area, and I believe the calculation that three-quarters of a million might find grazing thereon is a reasonable estimate. I also believe that large areas of those savannahs are very suitable for agricultural and mechanical tillage.

"Cattle, sheep and horses thrive. The cattle are large, healthy beasts in good condition and furnish excellent meat. The sheep are small and of inferior breed. The horses are small, and are more properly ponies, but they are capable of an astonishing amount of work. The remarkable thing is that during long years of great prosperity in this colony no attempt was made to open up this rich southern country. I confess that I can see no way of doing this except by a railway."

Not less important are the views expressed by Mr. Bland in the course of an interview. His report has not yet been published and naturally he was a little reticent; nevertheless, his statements are of great importance. He said that there are no very great difficulties in getting a railway to the Rupununi savannahs—there would be no bridging difficulties to encounter and black labor could be imported from the West Indian Islands; that there are great possibilities in the country, the timber resources of which alone would prove a reliable asset; and if the country is to go ahead a railway will have to be built.

These, in brief, are the views of the engineer. Their importance, as they affect the future development of the balata industry, cannot be exaggerated. The recent fall in the price of balata (and this is most marked in the New York market, according to our daily cable advices, which quote balata in that market at 50 cents per pound) is greatly hampering the industry. The expense of dispatching an expedition to the savannahs is enormous and at present prices can yield only a very small profit, if any at all. The superintendent of Garnett's Balata Station on the Rupununi states that it takes him twenty days to get to his station, and he takes with him sixteen hands, besides a bowman and captain. He averages the cost at $400. The difficulties with which the balata industry has to contend under these circumstances can readily be understood. The construction of a railway could not fail to enormously reduce these traveling expenses and to insure the commercial success of balata exportation. It will not be forgotten by some of your readers, perhaps, that I drew attention some months ago to the possibility of growing Ceará rubber on these Rupununi savannahs, providing there were some effective means of transport to the coast.

The annual report of the Institute of Mines and Forests for 1912-13 has just been published. The report states that in the past twelve months "there has been much progress made with the rubber plantations, and the highest authorities here are now quite satisfied that the cultivation of *Hevea Brasiliensis* has reached a stage warranting the belief that results will be reached equalling anything obtained in the Far East. Tapping of this species gave most encouraging results. With large areas suited to the cultivation of rubber all over the colony, it is not too much to expect that greater attention will be given to, and more capital expended on, increasing the area devoted to this purpose." The Institute states that there are 9,000,000 acres of easily accessible Crown lands suitable for rubber cultivation which can be leased from the government on most favorable terms, but it points out that only 2,000 acres are now planted with rubber, by far the greater area being in *Hevea Brasiliensis*.

With regard to the balata industry, the report states that the outlook is very promising. "Employers have not been victimized by unprincipled laborers to the same extent as was the case last year. This is one of the beneficial results of employers combining to give a fixed amount and no more by way of advance, and the refusing of employment to those who had given much trouble in past years by absconding and in other ways. Combining did away with much of the reckless competition to secure labor, which condition of things was taken advantage of by the dishonest laborers. The result of the combination to deal with labor in a settled way has shown clearly what had often been alleged, viz., that there were sufficient good men to supply the wants of employers and therefore no occasion for extra inducements to be offered to get the labor wanted." The exports of balata this year are nearly double those of last year, and the fact that this has been obtained by fewer companies is evidence of the improvement in labor conditions. If it were not for the falling prices the balata industry would at the present time be in a very healthy condition. As I have already pointed out, however, in the absence of adequate transport facilities, journeys to the far interior, with balata selling at 50 cents per pound, cannot be very profitable.

SPECIAL BOXES FOR PACKING RUBBER.

There has been a great deal of complaint among dealers and manufacturers because of the improper packing of much of the rubber shipped from the plantations, the rubber being forwarded in all sorts of cases—many of them rough on the inside so that splints of wood become imbedded in the sheets and biscuits. To meet the situation the Acme Tea Chest Co., Limited, of Glasgow, is manufacturing a packing box especially for rubber. It is of standard size, 24 x 19 x 19 inches and holds 200 pounds. The inside of the box is smooth so that the rubber comes out in a clean block. These boxes are shipped to the planters flat and are so constructed that they can be put together with very little effort and in a few minutes' time. They are kept in stock at several different points in the planting countries.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED NOVEMBER 4, 1913.

NO. 1,077,267. Shield for pneumatic tires. J. E. Fawcett, Platteville, Wis.
1,077,275. Tire protector. R. V. Hastings, Chicago, Ill.
1,077,310. Vehicle tire. B. C. Seaton, Detroit, Mich.
1,077,388. Vehicle wheel. J. Bray, Arlington Station, Cal.
1,077,401. Antiskid attachment for automobile tires. J. G. Florack, Rochester, N. Y.
1,077,407. Automobile tire. A. B. Hollenbeck, Sidney, N. Y.
1,077,430. Resilient wheel. M. C. Ray and E. K. Henderson, Nederland, Col.
1,077,434. Spring wheel. A. D. Seibert and B. R. Andrus, Pendleton, Ore.
1,077,440. Tire protector. V. K. Sturges, Oakland, Cal.
1,077,504. Tire. G. Anger, McKees Rocks, Pa.
1,077,612. Resilient wheel. G. A. Leitzman, Clayton, Ind.
1,077,618. Tire. W. Maginnis, Ogonta, Pa.
1,077,071. Garment supporter. R. T. Clarke, Columbus, Ohio.
1,077,683. Resilient tire for trucks. D. H. Deery, Bridgeport, Conn.
1,077,735. Gas bag for toy. F. Morinaga, Philadelphia, Pa.
1,077,766. Ear appliance for facilitating hearing. A. von Suchorzynski, Steglitz, near Berlin, Germany.
1,077,782. Resilient tire. D. A. York, Northgrove, Ind.
1,077,799. Vehicle wheel. A. R. Burkett, Manns Choice, Pa.
1,077,800. Life belt. T. B. Butters, New York.
1,077,868. Life saving garment and belt. J. and A. Berman, Manchester, England.
1,077,932. Corset. J. E. Heilner, New York.

Designs.

44,840. Bathing cap. E. A. Guinzburg, New York.
44,854. Vehicle tire. W. D. Morris, Youngstown, Ohio.
44,855. Vehicle tire. W. D. Morris, Youngstown, Ohio.

ISSUED NOVEMBER 11, 1913.

1,077,994. Vehicle wheel. W. A. Milam, Dallas, Tex.
1,078,061. Alarm for pneumatic tires. J. B. Polo, Clear Lake, S. D.
1,078,070. Pontianak compound and method of preparing same. G. Staunton, assignor to W. S. Potwin—both of Chicago, Ill.
1,078,086. Art of devulcanizing rubber. D. A. Cutler, Mount Vernon, N. Y.
1,078,097. Apparatus and method for splicing rubber tubing. F. W. Kremer, Rutherford, N. J.
1,078,099. Machine for forming rubber tubes. F. W. Kremer, Carlstadt, N. J.
1,078,109. Retainer for overshoes and rubbers. V. Reynolds, Marion, Ind.
1,078,112. Hose coupling. S. Storm, Mattoon, Ill.
1,078,149. Resilient wheel. H. Kirkby, Middletown, Conn.
1,078,150. Spring wheel. H. C. Knight, Portland, Me.
1,078,153. Tread for tires. J. F. LeBaron, Chardon, Ohio.
1,078,283. Toilet implement. F. O. Hilfiker, Irondequoit, N. Y., assignor to F. O. Hilfiker Co., Syracuse, N. Y.
1,078,307. Non-conducting material and process of making same. T. B. Parkison, Muncie, Ind., assignor to Union Fibre Co., Winona, Minn.
1,078,322. Antiskidding device. T. B. Thomas, Quincy, Mass.
1,078,333. Packing. A. L. Cole, Auburndale, Mass., assignor to Frank C. Parmenter, Gloucester, Mass.
1,078,364. Breathing appliance. W. Longway, Gary, Ind.
1,078,430. Resilient wheel for motor cars and the like. E. Graham, Battersea Park, and G. Wallace, London, England.
1,078,432. Lawn sprinkling device. J. S. Hadden, Huntington Park, Cal.
1,078,433. Sprinkler. J. S. Hadden, Huntington Park, and F. H. Johnson, South Pasadena, Cal.
1,078,443. Dress shield. L. L. Just, La Salle, Ill.
1,078,455. Airship. C. E. Myers, Frankfort, N. Y.
1,078,461. Wheel. M. D. Price, Miami, Fla.
1,078,515. Inner tubes for pneumatic tires. A. and A. Raymond, Washington, D. C.
1,078,579. Demountable rim. J. M. Gilbert, Mount Vernon, N. Y., assignor of one-half to The B. F. Goodrich Co., one-fourth to Goodyear Tire & Rubber Co.—both of Akron, Ohio, and one-fourth to United States Tire Co., New York.

Designs.

44,872. Lather brush. G. W. Gill, Manokin, Md.
44,873. Undergarment. V. Guinzburg, assignor to I. B. Kleinert Rubber Co.—both of New York.

Trade Marks.

70,371. Hood Rubber Co., Watertown, Mass. The word *Pacer* in horseshoe. For rubber boots and shoes, etc.
71,392. United Brush Manufacturing Co., New York. The words *Set In Rubber UBM.* For paint brushes, etc.
72,302. Boston Rubber Shoe Co., Malden, Mass. The word *Veto.* For rubber boots and shoes.

ISSUED NOVEMBER 18, 1913.

1,078,514. Aeronautical apparatus. A. Donath, New York.
1,078,632. Spring wheel. V. Mancini, Schenectady, N. Y.
1,078,824. Vaginal syringe. L. S. Brower, Black Rock, Ark.
1,078,825. Auxiliary raising and centering vehicle rim. A. J. A. Bruet, St. Denis, France.
1,078,916. Vehicle wheel. J. R. Gerard, Parsons, Kan.
1,078,974. Trousers belt. A. K. Wander and R. Dalmar, Chicago, Ill.
1,079,007. Water closet seat. H. M. Hoelscher, assignor to L. Wolff Mfg. Co.—both of Chicago, Ill.
1,079,026. Hose rack. M. Schnaier, New York.
1,079,038. Collapsible core. J. Yemiker, Akron, Ohio.
1,079,041. Wearing apparel. M. M. Dryfoos, New York.
1,079,061. Stamp. O. M. Pannier, assignor to Pannier Bros. Stamp Co.—both of Pittsburgh, Pa.
1,079,082. Pneumatic vehicle wheel. J. U. Wells, Fallen Leaf, Cal.
1,079,149. Overshoe holders or clamp. C. R. Schuey, Carterville, Ill.
1,079,175. Automobile tire. E. A. Howe, Bancroft, Iowa.
1,079,186. Process of manufacturing multiple chamber inner tubes for pneumatic tires. A. and A. Raymond, Washington, D. C.
1,079,203. Combination ice bag, water bottle and fountain syringe. C. J. Barrenpohl, New York.
1,079,251. Fireman's mask. A. F. Macrini, New York.
1,079,273. Auto tire protector. A. S. Standish, Cleveland, Ohio.
1,079,276. Electric massage apparatus. J. Thorell, Portland, Ore.
1,079,305. Knockdown wheel. J. E. Strietelmeier, assignor to The Ideal Wheel Co.—both of Cincinnati, Ohio.

Design.

44,890. Rubber mat. E. Hutchens, assignor to Federal Rubber Manufacturing Co.—both of Milwaukee, Wis.

Trade Mark.

66,672. W. S. Nott Co., Minneapolis, Minn. The word *Kenwood.* For rubber belting and rubber hose.

ISSUED NOVEMBER 25, 1913.

1,079,397. Vehicle tire. J. T. Clark, Provo, Utah.
1,079,464. Process for regenerating vulcanized rubber. C. P. Bary, assignor to H. P. C. G. Debauge—both of Paris, France.
1,079,500. Apparatus for raising submerged bodies. G. Lesourd, Paris, France.
1,079,515. Pneumatic tire. R. Rondeau, assignor to Société Fermière de l'Automatique Ducasble, Paris, France.
1,079,574. Automatic lawn sprinkler. E. L. Nicholson, Los Angeles, Cal.
1,079,601. Wrapping and unwrapping machine. C. Kuentzel, assignor to The Goodyear Tire & Rubber Co.—both of Akron, Ohio.
1,079,624. Shirt waist belt. I. C. Woodward, Chicago, Ill.
1,079,644. Vehicle wheel. R. K. Gratigny, Edgewater, N. J.
1,079,670. Ear trumpet. O. H. Sheppard, assignor to W. N. Sharp—both of Chicago, Ill.
1,079,703. Hood for mouthpieces of pipes or the like. H. E. Hagmüeller, Hoboken, N. J.
1,079,704. Combination tire valve stem and pressure gage. D. C. Hathaway, Sheldon, Ill.
1,079,755. Tire. J. J. Fields, New York.
1,079,781. Dust cap for tire valves. J. Lynn, Alice, Tex.
1,079,782. Liquid waterproof surfacing composition. G. W. Magnus, Seattle, Wash.
1,079,807. Coat closure. J. S. Snyderm, Newport, Pa.
1,079,907. Tread section for antiskidding devices. H. D. Weed, Syracuse, N. Y.

Trade Marks.

57,513. Empire Tire Co., Trenton, N. J. The words *Empire Peerless.* For rubber inner tubes for pneumatic tires.
64,774. Felten & Guilleaume Carlswerk Actien Gesellschaft, Mulheim-on-the-Rhine, Germany. The initials *F G* over word *Neptune* in circle. For india rubber, etc., mixed with waxes, etc.
64,946. C. H. Daniels, Newtonville and Boston, Mass. The words *Foot Prints* written over illustration of pair of feet. For boots and shoes made in whole or part of rubber.
72,078. The Mine & Smelter Supply Co., Denver, Col. The word *Massco.* For rubber and canvas belting, rubber tubing, etc.
72,235. Helmuth Voss, Hamburg, Germany. The word *Rubberine.* For a chemical for coloring rubber.
72,374. J. W. Buckley Rubber Co., New York. The word *Vena.* For rubber tubing, hose, etc.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1912.

**Denotes Patents for American Inventions.*

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 5, 1913.]

16,112 (1912). Tire attachments to rims. T. K. Clark, Wentworth, Durban, Natal.

16,129 (1912). Spring wheel with rubber tire. W. G. Brookes, Holmwood, St. Cross Estate, Farnham, Surrey.

16,144 (1912). Telephone conducting plugs separated by insulation. M. B. Richter, 32 Norrebrogade, Copenhagen.

*16,186 (1912). Tire protector. S. W. Funk, Charter Oak, Cal., U. S. A.

16,280 (1912). Spring wheels with continuous outer rigid ring and pneumatic rubber ring. C. E. Moser, 14 Rue Thiers, Boulogne-sur-Seine, France.

16,327 (1912). Printing stamps. A. Douard, Langley Bottom, Epsom, Surrey.

16,352 (1912). Treating rubber latex. S. C. Davidson, Sirocco Engineering Works, Belfast.

16,451 (1912). Rubber middlesole and heel cushion for boots and shoes. C. W. Johnson, 170 Hatherley Gardens, East Ham, London.

16,480 (1912). Elastic finger exercising apparatus. C. D. Kubicki, 13 Rue Campagne Première, Paris.

16,491 (1912). Football case made from rubber fabric. M. Fecht, 8 Leipzigerstrasse, Dresden, Germany.

16,524 (1912). Rubber blocks used in match packeting. Bryant & May, Fairfield Works, Bow, London.

16,579 (1912). Rubber pad for use in letter copying books. A. D. Klaber, 5 Holborn, London.

*16,587 (1912). Rubber band for maintaining in position ribs of parasols. J. Rose, Lime street, Lancaster, Pa., U. S. A.

*16,599 (1912). Attachment for securing elastic treads to inner rims. H. M. Ambler, 4908 Germantown avenue, Philadelphia, Pa., U. S. A.

16,607 (1912). Tire attachments to rims. E. Laurent, 16 Rue Cesar Bertholon, Saint Etienne, Loire, France.

16,627 (1912). Rubber tubing, used to prevent trapping of the fingers and to exclude draught, in vehicle doors. J. Bentley, 24 Bank Crest, Baildon, Yorkshire.

16,660 (1912). Tire casing of rubber encased fabric strips. J. T. Johnson and F. G. Mason, "Lindamere," Wanda Road, Caulfield, Victoria, Australia.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 12, 1913.]

16,731 (1912). Rubber liner for reservoir pens. H. Kaufman, 90 Milton street, London.

16,758 (1912). Electro-therapeutic appliances. G. Wilson and C. J. Wilson, 1 Preston street, Brighton.

16,760 (1912). Tire attachments to rims. J. H. Stafford, 76 Lytham Road, and S. Stafford, 2 Hyde Road, South Shore—both in Blackpool.

16,803 (1912). Cask gauges with rubber graduation rings. C. Critchley Salmonson, "West Down," Bradworthy, Devon.

16,811 (1912). Spring wheels for vehicles. A. Vietor, 4 Neudoferstrasse, Wiesbaden, Germany.

16,869 (1912). Spring wheels with soft tread, continuous outer rigid ring and helical springs. A. A. S. Williams, The Bungalow, Kingston Hill, Norbiton, Kingston, Surrey.

16,889 (1912). Tire inflating valves. W. Loebinger, 133 Grosvenor Road, Highbury, London.

16,916 (1912). Tire attachments to rims; non-metallic elastic tire bodies and cores. W. Edgell, Westfield House, and A. T. Edgell, Redfield Road—both in Midsomer Norton, Somerset.

16,930 (1912). Tire wrapping machines. J. Liddle, 154 St. Vincent street, Glasgow.

16,939 (1912). Detachable rim attachments to wheels. J. E. Wild, 27 Ruth street, Bolton.

16,977 (1912). Rubber impregnated hydraulic and like packing. J. Walker & Co., and J. Walker, Lion Works, Garford street, Poplar, London.

16,993 (1912). Machine for gumming, folding and perforating letter cards —comprising a rubber covered plate. J. E. Dorman and W. H. Dorman & Co., 45, Foregate street, Stafford.

17,071 (1912). Caoutchouc substances. Ges. fur Teerverwertung, Duisburg-Meiderich, Germany.

17,087 (1912). India rubber pad for vulcanite chin rest of violin. R. A. Stanley, 86 George street, Moss Side, Manchester.

17,119 (1912). Elastic tapes to replace corset lacings. W. Mackenzie, Warwick street, Hulme, Manchester.

*17,127 (1912). A combined vibratory and suction massage appliance. J. Birrell and W. Birrell, 1319 Denney Way, Seattle, Wash., U. S. A.

17,144 (1912). Braces for personal wear. P. Meier, 15a Frohngartenstrasse, St. Gallen, Switzerland.

17,150 (1912). Feeding bottles. P. Wisotzky, 45 Schiesshausstrasse, Darmstadt, Germany.

17,152 (1912). Coin freed apparatus comprising rubber bulb and disc. L. Bauer, 114 Albertinerstrasse, Lindenau, Leipsic, Germany, and A. Ficker, 2 Newman street, London.

17,170 (1912). Sole for bedroom slipper with rubber stiffening strip attached at heel. J. L. Verp, Victor Works, Atherstone.

17,173 (1912). Vulcanizers. W. Frost and H. Frost & Co., 30 Great Eastern street, London.

17,199 (1912). A device for printing on glass, china, etc., by means of a number of india rubber stamps. F. I. Gibbs, Ivydene, Frederick Road, Selly Oak, Birmingham.

17,217 (1912). Elastic tires. G. Morandi, 5 Via Pescioni, Florence, Italy.

17,223 (1912). Lamp black. Lampblack, Ltd., 3 Mumford Court, Milk street, and W. D. Menzies, 5 Guybon avenue, Herne Hill—both in London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 19, 1913.]

17,251 (1912). A boot or shoe sole having studs or knobs of india rubber mounted on a backing of the same material. G. W. Paine, 11 Grove Road, Windsor.

17,270 (1912). Block paving with rubber slabs attached to upper surfaces of blocks. M. M. Dessau, 60 London Wall, London.

17,288 (1912). Hard rubber cap for front end of loom shuttle. (W. B. Baker and E. B. Baker, Richmond street, and F. Livesey, The Bungalow, Fulwood—both in Preston, Lancashire.

17,385 (1912). Rubber in kinematographs, etc. C. Dupuis, 22 Rue de la Cerisaie, Charenton, Seine, France.

17,406 (1912). A contrivance for supporting a latex collecting vessel. A. Macnab, Balvelachlan, Callander, Perthshire.

17,413 (1912). Bandages for plants. W. Poenicke, 1b Chausseenstrasse, Delitzsch, Germany.

17,420 (1912). Golf practising appliances. W. Heggie, 11 George Quay, Dublin.

*17,423 (1912). Tread bands, projections and surfaces for wheel tires. A. Libert, Green Bay, and A. Dewarzegars, Brussels—both in Wisconsin, U. S. A.

17,429 (1912). India rubber ring to prevent rattling of carbide container in acetylene production. J. F. Byrne and Howes & Burley, Bishop street, Birmingham.

17,455 (1912). Detachable rim attachments to wheels. L. E. Laisne, 39 Boulevard Jeanne d'Arc, Douai, Nord, France.

17,463 (1912). An india rubber or like countersunk tip for boots and shoes. A. R. Huskisson, Woodleigh, Queen Victoria Road, Blackpool, Lancashire.

17,528 (1912). The cylindrical rollers of a roller bearing made of solid vulcanite. E. Jones, Broomfield House, Perry Bars, Staffordshire, and Lynoch, Ltd., Lion Works, Witton, Birmingham.

17,549 (1912). Press with rubber mattress for making compound glass sheets. E. Benedictus, 25 Rue Fourcroy, Paris.

17,564 (1912). Tires of rubber, formed with grooves and beads and with non-extensible covers. P. E. Wedemeyer, "Glenafon," Abbey Road, Llangollen, Denbighshire.

17,586 (1912). Vulcanizing tires. A. W. Gislow, Gislaved, Sweden.

17,589 (1912). Spring wheels with continuous outer rigid ring and helical springs and pneumatic cushions. T. H. Holroyd, 41 West Hill Road, Southfields, London.

*17,592 (1912). Pessaries. R. Jentzsch, corner Madison and Western streets, Chicago, Ill., U. S. A.

17,600 (1912). A trap attachment for poultry nest boxes which is provided with an elastic supported signaling device. J. Stoner, 123 High street, Crawley, Sussex.

17,630 (1912). Golf practising appliances. B. C. Quill, Ballycarty, Tralee, County Kerry.

17,639 (1912). Braces for personal wear. E. Suss, 10 Tal, Munich, and A. Gross, Pfaffenhofen-on-Ilm, Bavaria—both in Germany.

*17,644 (1912). Air tubes and chambers for wheel tires. E. Weil, Whitney Central Bldg., New Orleans, La., U. S. A.

*17,657 (1912). Spring wheels with continuous outer rigid ring and pneumatic rubber ring, and like cushions. G. E. Starn, Camden, N. J., U. S. A.

17,662 (1912). Air tubes and chambers for wheel tires. W. E. Lake, 7 Southampton Bldgs., London.

*17,667 (1912). Treating rubber. D. Spence, W. F. Russell and Diamond Rubber Co.—all of Akron, Ohio, U. S. A.

17,673 (1912). Carton making machines with rubber shoe feeds. A. Parr, 6 High View Park Gardens, West Norwood, and J. Wall, 61 Hailsham avenue, Streatham—both in London.

17,679 (1912). A pneumatic tire or an inner tube for a tire having a number of separately inflatable compartments. W. E. Lake, 7 Southampton Bldgs., London.

*17,681 (1912). Spring wheels. E. Kreh, P. O. Box 3, Mare Island, Cal., U. S. A.

*17,696 (1912). Spring core with outer cover, protected by rubber or like packing, for wheel tire. N. McQueen, Ludowici, Ga., U. S. A.

17,753 (1912). Diving helmet made of pliable waterproof material. H. & B. Drager, 53 Moislinger Allee, Lubeck, Germany.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 26, 1913.]

17,830 (1912). Coloring caoutchouc, etc. P. A. Newton, 6 Breams Bldgs., Chancery Lane, London.

17,864 (1912). Rubber insulated boots and shoes for electricians. J. H. C. Brooking and St. Helens Cable & Rubber Co., Arpley, Warrington.

17,905 (1912). A dental plate of hard rubber. H. Vigano, 98 Prinzregentenstrasse, Wilmersdorf, Berlin.

17,980 (1912). Electric resistance plates contained in metal tube with insulated lining. J. Roothaam, and Ferranti, Ltd., Hollinwood, Lancashire.

17,992 (1912). Detachable rim for wheels. C. Kindscherf, 1 Gebenstrasse, Hanover, and Continental Caoutchouc und Gutta Percha Cie, Hanover—both in Germany.

18,028 (1912). An elastic band shoe or slipper fastener. E. R. Panton, Cliff House, East Cliff, Bournemouth.

18,040 (1912). Lawn sprinkler. W. Edge, Harwood street, Blackburn, Lancashire.

18,053 (1912). Hat making press with rubber press bag. A. Turner and W. E. Turner, of Turner, Atherton & Co., Ashton Road, Denton, near Manchester.

18,081 (1912). Non-metallic elastic tire bodies and cores. H. B. Clayson, 2 Longton Grove, Sydenham, London.

18,084 (1912). Spring wheels with continuous outer rigid ring and helical and volute springs. V. Kochel, Prinz Ludwig Strasse, Freising, Germany.

18,104 (1912). Non-metallic elastic tire bodies and cores. C. Schragin, 22 Johannisstrasse, Berlin.

18,139 (1912). A process for producing molds for galvanoplastic reproduction which embodies the use of a rubber covered skeleton frame. B. Lowy, 69 Zieglerstrasse, Vienna.

18,250 (1912). Air pumps for inflating motor tires. G. Rigal, 1 Passage d'Iena, Levallois-Perret, Seine, France.

18,253 (1912). Balloon fabrics. E. C. R. Marks, 57 Lincoln's Inn Fields, London.

18,271 (1912). India rubber massage glove. W. Goy, 61 Frankenallee, Frankfort-on-the-Main, Germany.

18,277 (1912). Chewing gum prepared from gum dammar, the resin remaining after extraction of the india-rubber from Guayule and like rubbers. R. B. Ransford, 24 Southampton Bldgs., London.

18,294 (1912). Marine life saving appliances. H. Denayer, 22 Rue des Rentiers, Brussels.

18,337 (1912). A chemise provided with a waterproof apron. L. Kauffmann, 5 Rue Pierre-Chausson, Paris.

THE FRENCH REPUBLIC.

PATENTS ISSUED (With Dates of Application).

457,489 (May 6, 1913). E. Pochat. Improvements in appliances for strengthening the covers of pneumatic tires.

457,527 (May 6). S. Sauernheimer. Elastic tire for motor vehicles.

457,678 (May 9). F. E. Cooper. Improved mudguard for vehicle wheels.

457,698 (May 9). J. Zöttl and F. Zöttl. Wheel tire.

457,702 (May 9). B. Sohlmann. Pneumatic tire.

457,711 (May 9). H. E. Morgan. Air chamber for pneumatic tires.

457,729 (May 10). Baudon. Elastic wheel for all vehicles.

457,818 (April 5). F. Boulon. Arrangement and adjustment of rotating heels.

457,908 (May 14). W. E. Robertson. Improvements in vehicle wheels.

457,920 (July 24, 1912). A. Caubet and P. Gounon. Artificial gutta percha, with insulating properties superior to those of natural gutta percha, for electrical applications.

458,079 (May 20, 1913). J. G. Moomy. Process for manufacture of pieces intended for the repair of rubber articles.

458,115 (January 9). C. Hallé. Improvements in pneumatic tires.

458,181 (May 16). E. E. Marinier. Rubber pocket, with movable cover, in any material, to hold brush, sponge, etc.

458,216 (May 21). Mathews, Strange & Bliss. Improvements in the manufacture and preparation of rubber, or of analogous substances.

458,244 (May 22). M. F. Heyer. Improvements in eraser rubber.

458,287 (May 23). G. Marshall. Improvements in pneumatic and other tires.

458,395 (May 27). M. Cornet. Improvements in pneumatic tires.

458,671 (June 2). L. Romano. Improved demountable rim for vehicle wheels.

458,855 (June 2). Wilson & Marshall. Improvements in methods of inflating pneumatic tires for automobiles and other vehicles.

458,986 (June 9). H. Colloseus. Process of extracting rubber, gutta percha, balata, etc., from latex.

459,008 (May 7). Bartlett & Smith. Pneumatic vehicle tires.

459,005 (May 5). Badische Anilin und Soda Fabrik. Process for production of substances analogous to rubber.

459,134 (June 3). F. E. Matthews. Improvements in the preparation of rubber and of analogous substances.

459,163 (June 12). S. Goldreich. Process and machine for the easy removal of the non-lactiferous parts from the bark of *Landolphia* vines, and other descriptions of rubber plants.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each postpaid.]

THE GERMAN EMPIRE.

PATENTS ISSUED (with Dates of Validity).

267,502, Class 63e (December 20, 1911). Machine for inserting anti-skid rivets in rubber tires, covers, etc. Vereinigte Schwarzfarben und Chemische Werke, Wieshsaden.

267,945, Class 39b (December 25, 1912). Process for manufacture of products resembling soft rubber. Farbenfabriken, vorm. Friedr, Beyer & Co., Leverkusen.

267,948, Class 47d (April 13, 1912). Belt fastener. Christian Düssler, Nordlingen.

267,993, Class 39b (December 29, 1912). Process for regenerating rubber. Dr. Carl Harries, Kiel.

267,994, Class 39b (January 21, 1913). Process for regenerating rubber. Dr. Carl Harries, Kiel.

268,027, Class 39a (March 9, 1911). Process and machine for obtaining rubber from barks and other portions of plants. Fritz Kempter, Heinestrasse 10, Stuttgart.

268,071, Class 30b (June 7, 1912). Appliance for fastening soft rubber disks in the manufacture of suction chambers. K. J. Kleinschmidt, Treptower Park 17, Berlin-Treptow.

268,100, Class 12o (August 9, 1912). Process for manufacture of isoprene. Badische Anilin und Soda Fabrik, Ludwigshafen.

268,101, Class 12o (February 11, 1913). Process for manufacture of isoprene. Badische Anilin und Soda Fabrik, Ludwigshafen.

268,102, Class 12o (November 19, 1912). Process for manufacture of isoprene. Badische Anilin und Soda Fabrik, Ludwigshafen.

268,212, Class 47f (August 27, 1912). Process for making packing rings with a metal cover and soft inner portion. Willbrandt & Co., Hamburg.

A LETTER ON DIRECT RUBBER IMPORTATIONS.

EDITOR OF THE INDIA RUBBER WORLD:

DEAR SIR:

The elimination of the London market from the relations between eastern plantation owners and American consumers involves certain points of difficulty, the chief of which are: Examination at market of despatch on behalf of purchasers or consignees; care in packing; route of shipment, and financing.

When standards have been agreed on by which the various qualities will be distinctively known the form of examination will be a matter of arrangement. This applies particularly to purchases. In the case of consignments, when advances are to be made it is important to know that at least the amount of such advances is fully covered by the goods they represent. Official inspection is advisable more particularly as to the absence of any undesirable admixtures.

Such examination should extend to the cases as to their materials and forms of packing. As it would be distinctly undesirable to have any repacking on the way to New York, the original packing should be sufficiently good to stand the entire journey. In view of the sensitive character of rubber and its relatively high value, it would be unadvisable to exercise parsimony in this respect. The alleged necessity for repacking in London on account of the defective nature of the original packing is a trouble which has to be abolished before the question of rubber packing will be settled. It is, of course, doubtful whether the cases have any such ultimate value as would make it worth while to give special attention to this point.

As to route of shipment, where transshipment in London economizes in through freight the equivalent of such a rate should be obtainable at the port of shipment; but the packing should be sufficiently strong to stand transshipment without repacking. A through bill of lading to American port is advisable in such cases. Direct importers should be represented at intermediate points so as to be able, in case of need, to place their interests in proper hands.

Shipments of tropical products can be made direct to New York, being covered by the acceptances by London banks of the shipper's draft at three to four months' sight, against the shipping documents. The latter are sent to New York, where they are delivered to the purchasers, who in some cases have the option, instead of paying cash, of giving a "trust receipt" which binds them to place the London bank in funds to meet the above named acceptances at due dates.

Financing involves various considerations. It is, of course, highly important to have it expressed in the contracts whether the delivery is taking place in the East or in America and whether in American or Eastern currency, also what advances (if any) are to be given by the purchasers. The exact nature of any responsibility and where it starts are matters about which there should be no misunderstanding.

These points form elements in the daily life of the English import merchant and are among those requiring to be met by any American concern. In view of exchange fluctuations it is advisable to have all contracts in gold.

OLD MINCING LANE MERCHANT.

Report of the Crude Rubber Market.

THE principal characteristic of the London market for Upriver Fine Pará has been the absence of market fluctuations. On November 22 the price stood at 3s. 2d., about the average of the rate for the previous four weeks. It has since remained in close proximity to this figure; the lowest point touched being 3s. ½d. on December 13, and the highest 3s. 2½d. on December 4. On December 23 it closed at 3s. 1¼d. against 3s. 2d. on November 22.

As compared with a fall during the month of ¾d. per pound on Fine Pará, plantation rubber has lost 1½d. per pound, the closing days of November having witnessed a reduction of 1d., which was not regained during December. The prices respectively stood: November 22, 2s. 4¾d.; December 23, 2s. 3¼d. The premium in favor of Fine Pará was thus 9¼d. at the former date and 10d. at the later period.

Statistics to November 30 show the total visible supply of Brazilian rubber was 5,750 tons, against 5,920 October 31 and 5,320 on November 30, 1912. Stock of plantation rubber on November 30, 1913, was 3,684 tons as compared with 2,512 tons on November 30, 1912. That the market can carry this increased quantity is shown by the deliveries from January 1 to November 30 having been 28,400 tons in 1913 against 17,622 in 1912.

For the London sales of November 18 about 1,000 tons had been catalogued, but private transactions reduced the quantity for public auction to 900 tons. Notwithstanding the business which had been transacted privately since the previous sale there was a satisfactory demand, which maintained prices during the first two days. A slight relapse took place on the third day when a fall of 1d. per pound was recorded.

The London auctions of December 2 included about 1,150 tons. A good demand was recorded, which kept prices fairly steady, while American business was small. At the auctions of December 16, 691 tons were offered, which met with good demand at a decline of about ½d. per pound.

At Havre on November 28, 94 tons (principally Congo) were offered, a large proportion of which sold at satisfactory prices; the plantation rubber being almost all taken with an advance representing on the average 6 per cent.

An inscription sale took place at Rotterdam on December 18, including 55 tons Congo, 26 tons *Hevea* and 11 tons *Ficus*. On December 10 a sale was held at Amsterdam of 105 tons, including 92 tons *Hevea* and 9 tons *Ficus*. Practically the whole quantity was taken at satisfactory rates, *Hevea* in some cases showing an advance of 2 per cent.

At Antwerp on December 16 were offered 17 tons, Congo and various descriptions, with 61 tons plantation. Demand is understood to have been good.

NEW YORK QUOTATIONS.

Following are the quotations at New York one year ago, one month ago, and December 26—the current date:

PARA.	Jan. 1, '13.	Dec. 1, '13.	Dec. 31, '13.
Island, fine, new	102@103	66 @ 67	60 @ 61
Islands, fine, old	.....	.....	.....
Upriver, fine, new	111@112	76 @ 77	73 @ 74
Upriver, fine, old	118@119	.....	76 @ 79
Islands, coarse, new	56@ 57	29½@ 30	28 @ 29
Islands, coarse, old	.....	.....	.....
Upriver, coarse, new	82@ 83	48 @ 49	44½@ 45
Upriver, coarse, old	.....	.....	.....
Cametà	57@ 58	37½@ 38	36 @ 37
Caucho (Peruvian) ball	84@ 85	46 @ 47	44 @ 45
Caucho (Peruvian) sheet	.....	.....	.....
PLANTATION CEYLONS.			
Fine smoked sheet	112@113	65 @ 66	60 @ 61
Fine pale crepe	110@111	58 @ 59	56 @ 57
Fine sheets and biscuits	109@110	56 @ 57	56 @ 57
CENTRALS.			
Esmeralda, sausage	81@ 82	40 @ 41	39 @ 40
Guayaquil, strip	.....	.....	.....
Nicaragua, scrap	80@ 81	37 @ 39	38 @ 39
Panama	.....	.....	.....
Mexican plantation, sheet	.....	.....	.....
Mexican, scrap	79@ 80	37 @ 38	35 @ 39
Mexican, slab	.....	.....	.....
Mangabeira, sheet	.....	.....	.....
Guayule	60@ 61	.....	35 @ ..
Balata, sheet	.....	63 @ 64	.....
Balata, block	.....	44 @ 45	45 @ 50
AFRICAN.			
Lopori, ball, prime	.....	47 @ 48	44 @ 48
Lopori, strip, prime	.....	.....	.....
Aruwimi	98@ 99	37 @ 38	.....
Upper Congo, ball red	101@102	45 @ 46	.....
Ikelemba	.....	.....	.....
Sierra Leone, 1st quality	96@ 97	45 @ 46	.....
Massai, red	99@100	.....	.....
Soudan Niggers	.....	.....	.....
Cameroon, ball	.....	33 @ 40	28 @ 31
Benguela	74@ 75	.....	.....
Madagascar, pinky	.....	.....	.....
Accra, flake	26@ 27	20 @ 22	22 @ 23
EAST INDIAN.			
Assam	.....	.....	.....
Pontianak	6⅞@ ..	6 @ 6¼	.....
Borneo	.....	.....	.....

New York.

In regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York) advises as follows: "During December the demand for commercial paper has continued light, as it has been for the past two months, and rates have ruled very full, being about 5¾@6 per cent. for the best rubber names and 6¼@6¾ per cent. for those not so well known. However, quite an improvement in the situation is expected by the middle of January.

NEW YORK PRICES FOR NOVEMBER (NEW RUBBER).

	1913.	1912.	1911.
Upriver, fine	$0.73@0.80	$1.02@1.08	$0.99@1.06
Upriver, coarse	.46@ .49	.80@ .84	.87@ .91
Islands, fine	.66@ .70	.94@1.00	.93@1.00
Islands, coarse	.28@ .30	.53@ .58	.57@ .60
Cametá	.36@ .37	.55@ .58	.60@ .62

STATISTICS PARA INDIA RUBBER (IN TONS).

(INCLUDING CAUCHO).

STATISTICS FOR THE MONTH OF NOVEMBER.

	Pará.	Caucho.	1913. Tons.		1912. Tons.	1911. Tons.	1910. Tons.
Receipts at Pará	2,130	420	= 2,550	against	3,760	3,540	3,790
Shipments to Liverpool	1,430	180	= 1,610	"	1,840	1,580	2,070
Shipments to Continental Ports	270	190	= 460	"	670	730	330
Shipments to America	940	100	= 1,040	"	1,710	1,680	1,170
American Imports	1,500	220	= 1,720	"	1,810	1,945	1,430
American Deliveries	1,390	190	= 1,580	"	1,830	1,935	1,510
Liverpool Imports	1,140	80	= 1,220	"	1,285	1,380	1,440
Liverpool Deliveries	1,320	205	= 1,525	"	1,305	1,110	1,369
Continental Imports	260	70	= 330	"	460	560	380
Continental Deliveries	260	70	= 330	"	540	400	390

VISIBLE SUPPLY—1ST DECEMBER, 1913.

	1913. Pará.	1913. Caucho.	1912.	1911.	1910.
Stock in England, Pará, 1st hands	375	.....	260	1,920	2,126
Pará, 2nd hands	45	.....			211
Caucho	.....	210	150	230	458
Stock in Pará, 1st hands	310	70	90	140	600
2nd hands	540	80	220	610	640
Syndicate	810	.....	800	2,310	.....
Stock in America	180	90	160	290	250
Stock on Continent	20	40	20	180	90
Afloat—Europe	1,100	320	1,580	1,060	1,690
Afloat—America	370	50	1,060	290	450
	3,750	860			
Total Visible Supply, including Caucho.		4,610	4,340	7,030	6,515

CROP STATISTICS—30TH JUNE, 30TH NOVEMBER, 1913.

	Pará.	Caucho.	1913.	1912.	1911.	1910.
Pará Receipts 1913	10,700	2,190	12,890	14,140	12,180	13,140
Pará Receipts 1912	12,220	1,920				
Pará Shipments to America	5,030	980	6,010	8,090	6,790	5,510
Pará Shipments to Europe	5,420	1,350	6,770	8,090	6,850	6,900
England Landings, net			4,290	5,432	4,889	4,621
England Deliveries, net			5,475	6,392	7,839	4,839
America Landings, net			6,680	7,340	8,305	5,310
America Deliveries, net			6,590	7,350	7,915	5,200
Continental Imports, net			1,120	1,810	1,080	1,080
Continental Deliveries, net			1,310	1,890	1,010	1,040

POSITION—1ST DECEMBER, 1913.

Decrease in Receipts during November, 1913, against November, 1912	1,210
Decrease in Receipts—Crop, July/November, 1913, against 1912	*1,250
Decrease in Deliveries—Crop, July/November, 1913, England and Continent, against 1912	1,497
Decrease in Deliveries—Crop, July/November, 1913, America, against 1912	760
Increase in Visible Supply Pará Grades, against 1st December last year	270
Increase in Stock, England, November 30th, 1913, against November 31st, 1912	220

*A decrease of 1,520 tons Rubber, and an increase of 270 tons Caucho.

During the month 130 tons, including 20 tons Caucho, have been shipped from Europe to America.

WM. WRIGHT & CO., Brokers,
2nd December, 1913. 21, Mincing Lane, London, E. C.

Rubber Scrap Prices.

LATE NEW YORK QUOTATIONS.—Prices paid by consumers for carload lots, per pound.

	Dec. 30, '13.
Old rubber boots and shoes—domestic	7¾@ 8
Old rubber boots and shoes—foreign	7½@ 7⅝
Pneumatic bicycle tires	4½@ 4¾
Automobile tires	5⅛@ 5¼
Solid rubber wagon and carriage tires	5¼@ 5½
White trimmed rubber	10 @10¼
Heavy black rubber	3¾@ 4
Air brake hose	3½@ 4
Garden hose	1 @ 1¼
Fire and large hose	2 @ 2⅛
Matting	⅝@ ¾
No. 1 white auto tires	6 @ 6½
Foreign auto tires	5⅛@ 5¼

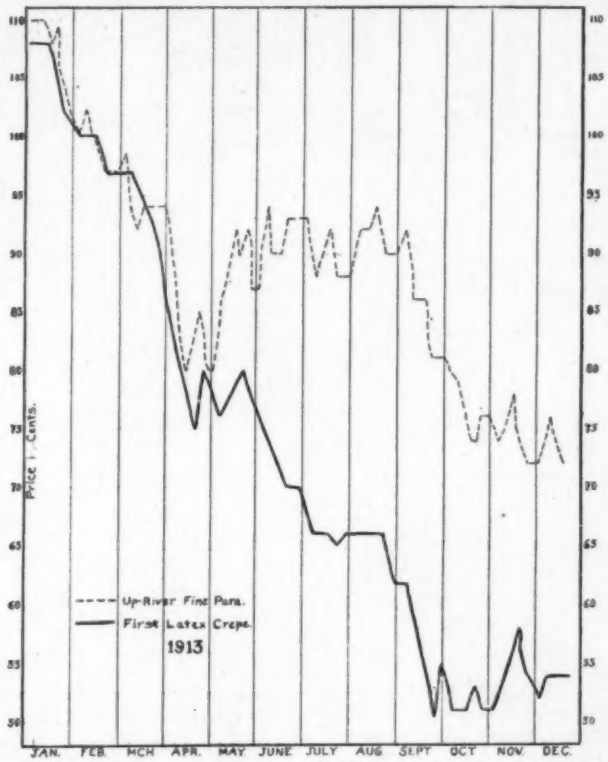


CHART SHOWING FLUCTUATIONS IN RUBBER PRICES DURING 1913.

Amsterdam.

JOOSTEN & JANSSEN report [December 10]:

Today's sale was decidedly favorable in its results. Almost the whole of the 105 tons (principally *Hevea*) was sold at satisfactory rates, in some instances commanding a slight advance.

Rotterdam.

HAVELAAR & DE VRIES report [December 2]:

A sale of 97 tons is announced for December 18, principally including Congo, *Hevea* and *Ficus*.

IMPORTS FROM PARA AT NEW YORK.

[*The Figures Indicate Weight in Pounds.*]

NOVEMBER 28.—By the *Christopher*, from Pará and Manáos:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Arnold & Zeiss	130,700	37,500	164,100	21,600=	353,900
Meyer & Brown	137,900	19,600	75,600	73,300=	306,400
General Rubber Co.	.....	.....	22,000	.....=	22,000
H. A. Astlett & Co.	54,200	9,500	86,800	8,500=	159,000
Johnstone Whitworth & Co.	23,200	7,900	.....	.....=	31,100
American Express Co.	11,100	.....	.....	.....=	11,100
Total	357,100	74,500	348,500	103,400=	883,500

DECEMBER 16.—By the steamer *Dominic*, from Pará and Manáos:

Consignee.	Fine.	Medium.	Coarse.	Caucho.	Total.
Arnold & Zeiss	535,100	109,500	226,100	84,000=	954,700
Meyer & Brown	135,400	33,500	83,900	37,200=	290,000
General Rubber Co.	70,600	12,200	40,800	3,200=	126,800
Henderson & Korn	60,000	4,000	45,000	.....=	109,000
James T. Johnstone	.....	.....	4,500	.....=	4,500
H. A. Astlett & Co.	23,200	8,900	36,100	600=	68,800
G. Amsinck & Co.	125,700	400	24,000	11,300=	161,400
American Export Co.	11,100	.....	.....	.....=	11,100
American Export Co.	3,800	300	300	.....=	4,400
Total	964,900	168,800	460,700	136,300=	1,730,700

PARA RUBBER VIA EUROPE.

POUNDS.

NOVEMBER 21.—By the *Pennsylvania*=Hamburg:
Ed. Maurer (Fine) 6,000

NOVEMBER 24.—By the *Carmania*=Liverpool:
Arnold & Zeiss (Fine) 56,000
Various (Caucho) 22,500 78,500

NOVEMBER 26.—By the *Finland*=Antwerp:
Robert Badenhop (Fine) 8,000

NOVEMBER 28.—By the *Lusitania*=Liverpool:
Arnold & Zeiss (Fine) 210,500

NOVEMBER 28.—By the *President Lincoln*=Hamburg:
Ed. Maurer (Fine) 5,000
Rubber & Guayule Agency, Inc. (Fine) 1,500 6,500

NOVEMBER 29.—By the *Allianca*=Colon:
F. Rosenstern & Co. (Fine) 3,600

DECEMBER 1.—By the *Baltic*=Liverpool:
Raw Products Co. (Coarse) 22,500
Robinson & Co. (Fine) 4,500 27,000

DECEMBER 2.—By the *Kaiserin Auguste Victoria*=Hamburg:
Henderson & Korn (Coarse) 7,000
Ed. Maurer (Fine) 11,200
Various (Fine) 10,000 28,200

DECEMBER 8.—By the *Caronia*=Liverpool:
Arnold & Zeiss (Fine) 22,500
Raw Products Co. (Fine) 11,200 33,700

DECEMBER 8.—By the *Lapland*=Antwerp:
Various (Fine) 4,000

DECEMBER 11.—By the *Patricia*=Hamburg:
Rubber & Guayule Agency, Inc. (Fine) 16,000
Rubber & Guayule Agency, Inc. (Coarse) 33,500 49,500

DECEMBER 12.—By the *Mauretania*=Liverpool:
Robinson & Co. (Fine) 2,200

DECEMBER 15.—By the *Cymric*=Liverpool:
Henderson & Korn (Fine) 11,200

DECEMBER 16.—By the *Vaderland*=Antwerp:
Meyer & Brown (Fine) 11,200

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

POUNDS.

NOVEMBER 24.—By the *Seguranca*=Mexico:
N. London 12,000
Hermann Kluge 2,000
Murphy & Fultz 600
Harburger & Stack 800
W. Hawes & Co. 800
W. Loaiza & Co. 2,000
Various 4,500 22,700

NOVEMBER 24.—By the *Mandeville*=Belize:
G. Amsinck & Co. 2,500

NOVEMBER 24.—By the *Carl Schurz*=Colombia:
G. Amsinck & Co. 2,000
A. Lindo & Co. 1,100
Andean Trading Co. 5,000 8,100

NOVEMBER 24.—By the *Spenser*=Bahia:
Adolph Hirsch & Co. 37,500

NOVEMBER 24.—By the *Panama*=Colon:
G. Amsinck & Co. 2,600
Mecke & Co. 1,100
American Trading Co. 3,000
Piza, Nephews & Co. 3,000
Colombian Smelting & Refining Works 3,200 12,900

NOVEMBER 24.—By the *Prince Eitel Frederick*=Colombia:
Kunhardt & Co. 1,100

NOVEMBER 28.—By the *Sarnia*=Frontera:
Meyer & Brown 2,200
E. Steiger & Co. 3,000
Lanman & Kemp 1,000 6,200

NOVEMBER 28.—By the *Caracas*=Port Cabello:
G. Amsinck & Co. 500

NOVEMBER 29.—By the *Morro Castle*=Mexico:
American Trading Co. 300
Hermann Kluge 200
Mecke & Co. 300 800

DECEMBER 1.—By the *Albingia*=Cartagena:
Caballero & Blanco 1,000

DECEMBER 1.—By the *Antilla*=Tampico:
H. R. Jefferds *33,500

DECEMBER 2.—By the *Tivives*=Port Limon:
A. Held 600

DECEMBER 2.—By the *Oregonian*=Mexico:
Harburger & Stack 100
Alden & Co. 3,000
H. Marquardt & Co. 600
Various 1,000 4,700

DECEMBER 4.—By the *Oratava*=Colon:
Pablo Calvet & Co. 500

DECEMBER 4.—By the *Prince August Wilhelm*=Colombia:
Suzarte & Whitney 2,500

DECEMBER 4.—By the *Sibiria*=Frontera:
Meyer & Brown 700
Lanman & Kemp 500 1,200

DECEMBER 5.—By the *Colon*=Colon:
G. Amsinck & Co. 5,000
C. E. Griffin 1,000
Mecke & Co. 1,100
Meyer Hecht 200 7,200

DECEMBER 6.—By the *Esperanza*=Mexico:
H. Marquardt & Co. 1,000
G. Amsinck & Co. 300
Maxwell Riddle 500
General Export & Commission Co. 4,000 5,800

DECEMBER 8.—By the *Prinz Sigismund*=Colombia:
Kunhardt & Co. 800
Various 1,000 1,800

DECEMBER 10.—By the *Emil L. Boas*=Colombia:
G. Amsinck & Co. 700

DECEMBER 10.—By the *Suriname*=Puerto Cortez:
Rosenthal & Sons 1,200
Broedermann & Litzrodt 1,000 2,200

DECEMBER 11.—By the *Almirante*=Cartagena:
R. Del Castillo 2,000
G. Amsinck & Co. 600 2,600

DECEMBER 12.—By the *Advance*=Colon:
G. A. Alden & Co. 5,500
G. Amsinck & Co. 200
Various 2,500 8,200

DECEMBER 13.—By the *Mexico*=Mexico:
Willard Hawes & Co. 1,200
G. Amsinck & Co. 400
E. Steiger & Co. 200 1,800

DECEMBER 15.—By the *Allemania*=Colombia:
Caballero & Blanco 100
A. Held 7,000
Pottberg, Ebeling & Co. 300 7,400

DECEMBER 16.—By the *Tennyson*=Bahia:
Adolph Hirsch & Co. 22,500

DECEMBER 17.—By the *Magdalena*=Colon:
Kunhardt & Co. 1,000
A. Held 2,000 3,000

DECEMBER 17.—By the *Panama*=Colon:
Broedermann & Litzrodt 800
Isaac Brandon & Bros. 2,300
Piza Nephews & Co. 2,300
Pablo Calvet & Co. 2,200 7,600

DECEMBER 17.—By the *Prinz Joachim*=Colombia:
Suzarte & Whitney 800
Andean Trading Co. 5,000 5,800

AFRICAN.

POUNDS.

NOVEMBER 21.—By the *Pennsylvania*=Hamburg:
Arnold & Zeiss 22,500
Rubber & Guayule Agency, Inc. 11,000
James T. Johnstone 3,000 36,500

NOVEMBER 24.—By the *Carmania*=Liverpool:
Robinson & Co. 2,000

NOVEMBER 26.—By the *Finland*=Antwerp:
Meyer & Brown 17,000

NOVEMBER 28.—By the *President Lincoln*=Hamburg:
Arnold & Zeiss 36,000
Henderson & Korn 22,500
Rubber & Guayule Agency, Inc. 3,500
Various 13,500 75,500

DECEMBER 2.—By the *New Amsterdam*=Amsterdam:
Various 5,600

DECEMBER 2.—By the *Zeeland*=Antwerp:
Arnold & Zeiss 18,500
Rubber & Guayule Agency, Inc. 3,000
Johnstone Whitworth & Co. 8,000
Rubber Trading Co. 3,500
Various 7,000 32,000

DECEMBER 2.—By the *Minneapolis*=London:
Robert Badenhop 10,000

DECEMBER 2.—By the *Kaiserin Auguste Victoria*=Hamburg:
Ed. Maurer 11,200
Rubber & Guayule Agency, Inc. 7,500
Various 4,500 23,200

DECEMBER 3.—By the *Guatemala*=Havre:
Arnold & Zeiss 40,000
Various 18,000 58,000

DECEMBER 3.—By the *Niagara*=Havre:
Arnold & Zeiss 7,000

DECEMBER 6.—By the *Celtic*=Liverpool:
Robinson & Co. 15,000

DECEMBER 8.—By the *Caronia*=Liverpool:
Various 7,000

DECEMBER 8.—By the *Lapland*=Antwerp:
Meyer & Brown 4,000
Johnstone Whitworth Co. 6,000 10,000

DECEMBER 8.—By the *Rochambeau*=Havre:
Meyer & Brown 60,000

DECEMBER 9.—By the *Minnehaha*=London:
Arnold & Zeiss 35,000
Various 11,200 46,200

DECEMBER 11.—By the *Patricia*=Hamburg:
Arnold & Zeiss 40,000
Henderson & Korn 22,500
Johnstone Whitworth & Co. 11,200
Rubber & Guayule Agency, Inc.. 60,000
Various 11,000 144,700

DECEMBER 15.—By the *St. Paul*=Southampton:
Robinson & Co. 16,000

DECEMBER 15.—By the *Cymric*=Liverpool:
Arnold & Zeiss 7,500
Robinson & Co. 2,200
Various 7,500 17,200

DECEMBER 16.—By the *Vaderland*=Antwerp:
Various 13,500

DECEMBER 16.—By the *Satsuma*=Singapore:
Various 20,000

DECEMBER 19.—By the *Barcelona*=Hamburg:
Various 5,000

EAST INDIAN.

[*Denotes plantation rubber.]

POUNDS.

NOVEMBER 21.—By the *Majestic*=Southampton:
Henderson & Korn *26,000
Ed. Maurer *11,200
Chas. T. Wilson *6,000
Meyer & Brown *5,000 *48,200

NOVEMBER 21.—By the *Pennsylvania*=Hamburg:
Rubber & Guayule Agency, Inc. *7,000

NOVEMBER 24.—By the *Philadelphia*=Southampton:
Meyer & Brown *12,000
Ed. Maurer *25,000
Robinson & Co. *50,000
Arnold & Zeiss *28,000
Henderson & Korn *17,000
Chas. T. Wilson *2,200
T. H. Cone *3,000
Various *11,200 *148,400

NOVEMBER 24.—By the *Carmania*=Liverpool:
General Rubber Co. *537,000

NOVEMBER 26.—By the *Karonga*=Colombo:
Meyer & Brown *18,000
Ed. Maurer *35,000
W. R. Grace & Co. *13,500
Various *33,500 *100,000

NOVEMBER 26.—By the *Finland*=Antwerp:
Meyer & Brown *107,000
Arnold & Zeiss *30,000 *137,000

NOVEMBER 26.—By the *Maryland*=London:
Meyer & Brown *67,000
W. Stiles *3,000
Robinson & Co. *22,500
James T. Johnstone *125,000
Rubber & Guayule Agency, Inc. *7,000
Chas. T. Wilson *100,000
W. R. Grace & Co. *33,500
Henderson & Korn *11,200
General Rubber Co. *268,000
Arnold & Zeiss *45,000
Adolph Hirsch & Co. *3,500
Rubber Trading Co. *2,200
Raw Products Co. *3,000
Various *45,400 *736,300

NOVEMBER 28.—By the *Lusitania*=Liverpool:
General Rubber Co. *28,000
James T. Johnstone *6,000 *34,000

NOVEMBER 28.—By the *Oceanic*=Southampton:
Meyer & Brown *37,000
Arnold & Zeiss *33,500
Rubber & Guayule Agency, Inc. *85,000
Robinson & Co. *40,000
W. R. Grace & Co. *35,000
Ed. Maurer *31,500
Henderson & Korn *168,000
Rubber Trading Co. *1,500 *421,500

NOVEMBER 28.—By the *President Lincoln*=Hamburg:

Ed. Maurer	*12,000	
Chas. T. Wilson	*7,000	
Rubber & Guayule Agency, Inc.	*17,500	
Various	*35,000	*71,500

DECEMBER 1.—By the *Karema*=Colombo:

Meyer & Brown	*17,500	
W. R. Grace & Co	*38,000	
W. R. Grace & Co	*15,000	
H. W. Peabody & Co	*6,500	
Ed. Maurer	*4,500	*81,500

DECEMBER 1.—By the *Westerdyk*=Amsterdam:

Meyer & Brown	*28,200	
Rubber Trading Co	*1,200	
Various	*1,100	*30,500

DECEMBER 2.—By the *New Amsterdam*=Amsterdam:

Meyer & Brown	*64,000	
Chas. T. Wilson	*1,000	
Robert Badenhop	*1,500	
Rubber Trading Co	*3,500	
Various	*46,000	*116,000

DECEMBER 2.—By the *Zeeland*=Antwerp:

Meyer & Brown	*58,000	
Arnold & Zeiss	*11,200	
Various	*2,200	*71,400

DECEMBER 2.—By the *Minneapolis*=London:

General Rubber Co	*325,000	
Chas. T. Wilson & Co	*135,000	
Arnold & Zeiss	*90,000	
Ed. Maurer	*45,000	
Adolph Hirsch & Co	*30,000	
Johnstone Whitworth Co	*27,000	
Meyer & Brown	*26,200	
Rubber & Guayule Agency, Inc.	*22,500	
Robinson & Co	*15,000	
L. Littlejohn & Co	*11,200	
W. Stiles	*5,000	
W. R. Grace & Co	*3,000	
Various	*31,200	*766,100

DECEMBER 2.—By the *Kentucky*=Colombo:

W. R. Grace & Co	*45,000	
Ed. Maurer	*26,000	
Meyer & Brown	*23,500	
Various	*26,500	*121,000

DECEMBER 2.—By the *Kaiserin Auguste Victoria*=Hamburg:

Arnold & Zeiss	*9,000	
Rubber & Guayule Agency, Inc.	*2,000	
Various	*10,000	*21,000

DECEMBER 3.—By the *Guatemala*=Havre:

Michelin Tire Co		*40,000

DECEMBER 3.—By the *Niagara*=Havre:

Michelin Tire Co		*22,500

DECEMBER 4.—By the *New York*=Southampton:

Meyer & Brown	*30,000	
Arnold & Zeiss	*56,000	
W. Stiles	*7,000	
Ed. Maurer	*7,000	
Ed. Maurer	*11,200	
Henderson & Korn	*50,000	*161,200

DECEMBER 8.—By the *Caronia*=Liverpool:

General Rubber Co		*225,000

DECEMBER 8.—By the *Lapland*=Antwerp:

Meyer & Brown	*116,500	
Arnold & Zeiss	*78,500	
General Rubber Co	*11,200	
Various	*22,500	*228,700

DECEMBER 9.—By the *Minnehaha*=London:

General Rubber Co	*240,000	
Arnold & Zeiss	*225,000	
Meyer & Brown	*93,500	
Chas. T. Wilson	*78,000	
Ed. Maurer	*25,000	
Johnstone Whitworth & Co	*20,000	
L. Littlejohn & Co	*12,500	
Henderson & Korn	*5,000	
Robinson & Co	*4,500	
Adolph Hirsch & Co	*4,000	
W. Stiles	*3,500	
Various	*135,000	*846,000

DECEMBER 10.—By the *Noordam*=Amsterdam:

Various		*13,500

DECEMBER 10.—By the *Fruenfels*=Colombo:

Meyer & Brown	*17,000	
W. R. Grace & Co	*60,000	
H. W. Peabody & Co	*8,000	
Ed. Maurer	*16,000	
Various	*17,000	*118,000

DECEMBER 11.—By the *Olympic*=Southampton:

Meyer & Brown	*38,500	
W. R. Grace & Co	*14,000	
Ed. Maurer	*11,200	
Johnstone Whitworth Co	*7,000	
Raw Products Co	*5,600	
Arnold & Zeiss	*40,000	*116,300

DECEMBER 11.—By the *Patricia*=Hamburg:

Various		*7,500

DECEMBER 15.—By the *Minnewaska*=London:

Meyer & Brown	*35,000	
General Rubber Co	*82,000	
Johnstone Whitworth & Co	*22,500	
Charles T. Wilson	*17,000	
Western Electric Co	*17,000	
Various	*6,000	*179,500

DECEMBER 15.—By the *St. Paul*=Southampton:

Henderson & Korn	*60,000	
Ed. Maurer	*22,500	
W. R. Grace & Co	*13,500	
Arnold & Zeiss	*17,500	
Robinson & Co	*25,000	
Charles T. Wilson	*11,200	
Raw Products Co	*7,000	
Rubber Trading Co	*2,200	*158,900

DECEMBER 16.—By the *Vaderland*=Antwerp:

Meyer & Brown		*50,000

DECEMBER 16.—By the *Satsuma*=Singapore:

Henderson & Korn	*56,000	
W. R. Grace & Co	*9,000	
Malaysian Rubber Co	*8,000	
Ed. Maurer	*50,000	
L. Littlejohn & Co	*33,500	
L. Littlejohn & Co	*11,200	
Arnold & Zeiss	*4,500	
Various	*35,000	*207,200

DECEMBER 18.—By the *St. Louis*=Southampton:

Meyer & Brown	*28,500	
Rubber Trading Co	*8,000	
Robinson & Co	*19,500	
W. R. Grace & Co	*60,000	
Johnstone Whitworth & Co	*4,500	
Arnold & Zeiss	*220,000	
Henderson & Korn	*5,600	
Ed. Maurer	*11,200	
Various	*30,700	*388,000

DECEMBER 19.—By the *Shimosa*=Singapore:

Malaysian Rubber Co	*5,600	
Arnold & Zeiss	*2,200	
Ed. Maurer	*22,500	
W. R. Grace & Co	*3,500	
Henderson & Korn	*11,200	
Ed. Maurer	*4,000	
L. Littlejohn & Co	*13,500	
Ed. Boustead & Co	*8,000	
Hadden & Co	*2,200	
Various	*22,700	*95,400

DECEMBER 19.—By the *Afghan Prince*=Singapore:

Meyer & Brown	*2,200	
W. R. Grace & Co	*16,000	
Henderson & Korn	*33,500	
L. Littlejohn & Co	*33,500	
Arnold & Zeiss	*6,000	
Malaysian Rubber Co	*8,000	
Ed. Maurer	*27,000	*126,200

DECEMBER 19.—By the *Barcelona*=Hamburg:

Meyer & Brown	*8,000	
Various	*7,000	*15,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—NOVEMBER, 1913.

Imports:	Pounds.	Value.
India-rubber	9,718,004	$5,110,017
Balata	231,008	116,875
Guayule	.....	.....
Gutta-percha	35,740	22,269
Gutta-jelutong (Pontianak)	328,113	21,653
Total	10,312,865	$5,270,814
Exports:		
India-rubber	54,389	32,983
Balata	48,616	25,399
Guayule	31,687	12,040
Gutta-percha	.....	.....
Reclaimed rubber	101,193	12,052
Gutta-jelutong (Pontianak)	.....	.....
Rubber scrap, imported	1,817,104	155,922
Rubber scrap, exported	785,310	35,771

BOSTON ARRIVALS.

IMPORTS IN NOVEMBER, 1913.

	Pounds.	Value.
Gutta-jelutong	13,443	384
India rubber	32,985	20,603

EXPORTS OF INDIA-RUBBER AND CAUCHO FROM PARA, MANAOS AND IQUITOS FOR OCTOBER, 1913 (IN KILOGRAMS).

	NEW YORK.					EUROPE.					GRAND
EXPORTERS—	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	TOTAL.
Zarges, Berringer & Co	159,611	31,975	120,042	21,613	333,241	338,240	29,985	47,168	63,564	478,957	812,198
General Rubber Co. of Brazil	60,493	11,147	25,048	5,039	101,727	11,250	5,409	1,880	723	19,262	120,989
J. Marques	151,324	46,947	95,567	57,267	351,105	150,533	1,360	24,680	.....	176,573	527,678
Seligmann & Co	37,042	.....	5,353	19,742	62,137	19,259	.....	.....	16,003	35,262	97,399
Suarez Hermanos & Co., Ltd	.....	.....	.....	.....	.....	46,988	1,915	10,408	5,269	64,580	64,580
De Lagotellerie & Co	.....	.....	.....	.....	.....	34,510	1,870	.....	.....	36,380	36,380
Pires Teixeira & Co	27,370	4,250	34,320	.....	65,940	20,910	.....	2,310	.....	23,220	89,160
Sundry exporters	2,720	.....	2,640	560	5,920	9,062	1,052	1,032	147	11,293	17,213
Itacoatiara, direct	.....	.....	.....	.....	.....	11,291	1,540	4,654	1,007	18,492	18,492
	438,560	94,319	282,970	104,221	920,070	642,043	43,131	92,132	86,713	864,019	1,784,089
Manáos, direct	402,838	85,279	80,392	88,358	656,867	458,649	49,146	38,789	95,939	642,523	1,299,390
Iquitos, direct	58,525	2,449	8,637	23,810	93,426	.....	.....	.....	.....	.....	93,426
Total, October, 1913	899,923	182,047	371,999	216,394	1,670,363	1,100,692	92,277	130,921	182,652	1,506,542	3,176,905

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RUBBER ARRIVALS FROM THE CONGO.

DECEMBER 10.—By the steamer *Elisabethville:*

Bunge & Co.	(Belgika) *kilos*	1,000	
do	(Comp. Commerciale Congolais)	38,000	
do	(Cie. du Congo belge)	2,300	
do	(Comfina)	15,000	
do	(Forminière)	1,300	
do		7,000	
Société Coloniale Anversoise	(Kasai)	100,763	
do	(Intertropical)	20,205	
do	(Comminière)	45,886	
Crédit Colonial & Commercial (Anc. L. & W. Van de Velde—S. A.)	(Crevelde)	12,700	
Willaert Frères		5,000	
Charles Dethier	(American Congo Cy)	2,000	251,154

Antwerp.

RUBBER ARRIVALS FOR NOVEMBER.

DETAILS.	1913	1912.	1911.	1910.	1909.
Stocks, Oct. 31...*kilos*	638,076	568,819	578,208	598,774	464,831
Arrivals in November—					
Congo sorts	191,535	403,281	148,361	344,885	417,392
Other sorts	301	4,357	63,487	54,404	68,923
Plantation sorts	156,059	161,154	70,761	53,536	47,308
Aggregating	985,971	1,137,611	860,817	1,051,599	998,454
Sales in November	439,372	430,066	226,555	483,451	262,838
Stocks, November 30	546,599	707,545	634,262	568,148	735,616
Arrivals since Jan. 1—					
Congo sorts	2,652,540	3,061,697	2,854,412	2,870,684	3,276,349
Other sorts	111,717	131,291	433,347	369,227	807,364
Plantation sorts	1,898,676	1,258,777	596,740	518,062	286,248
Aggregating	4,662,933	4,451,765	3,884,499	3,757,973	4,369,961
Sales since January 1	4,627,384	4,408,758	3,838,549	3,731,335	4,230,080

Plantation Rubber from the Far East.

EXPORTS OF CEYLON-GROWN RUBBER.

[From January 1 to November 10, 1913. Compiled by the Ceylon Chamber of Commerce.]

	1912.	1913.
To Great Britain *pounds*	6,343,787	11,936,265
To United States	3,572,959	5,197,727
To Belgium	999,707	3,226,186
To Australia	219,736	417,593
To Germany	156,364	213,017
To Austria	62,832	30,097
To Japan	55,118	222,605
To Canada	22,078	.....
To Italy	5,909	41,074
To Russia	2,288	11,301
To Holland	2,282	992
To France	2,017	15,682
To India	400	1,381
To Norway and Sweden	39	.....
To Straits Settlements	.....	97,120
Total	11,445,516	21,411,040

(Same period, 1911, 5,115,241; same period, 1910, 2,706,197.)

The export figures of rubber for 1913, given in the above table, include the imports re-exported. (These amount to 1,991,137 pounds—1,495,190 pounds from the Straits, and 495,947 pounds from India.—Ed. C. O.) To arrive at the approximate quantity of Ceylon rubber exported for 1913 to date, deduct the quantity of imports from the total exports. In previous years the exports of Ceylon rubber only were given.

TOTAL EXPORTS FROM MALAYA.

[From January 1 to dates named. Reported by Barlow & Co., Singapore. These figures include the production of the Federated Malay States, but not of Ceylon.]

To—	Singapore.	Penang, Sept. 30.	Port Swettenham, Oct. 31.	TOTAL.
Great Britain *pounds*	16,154,472	10,807,733	19,816,402	46,778,607
Continent	227,114	96,000	2,509,881	2,832,995
Japan	886,398	.....	.....	886,398
Ceylon	59,079	210,133	1,125,633	1,394,845
United States	4,694,566	220,667	.....	4,915,233
Australia	73,716	.....	.....	73,716
Total	22,095,345	11,334,533	23,451,916	56,881,794
Same period, 1912	11,440,319	6,737,897	16,673,987	34,852,203
Same period, 1911	5,291,205	3,565,100	9,539,339	18,395,644
Same period, 1910	2,980,439	1,652,782	6,886,394	11,519,615